LONG-TERM WATER SUPPLY NEEDS OF THE ATLANTA REGION FROM THE APALACHICOLA-CHATTAHOOCHEE-FLINT RIVER BASIN AND THE OPERATION OF BUFORD DAM AND LAKE SIDNEY LANIER IN MEETING THOSE NEEDS

(101-84)

HEARING

BEFORE THE
SUBCOMMITTEE ON WATER RESOURCES
OF THE
COMMITTEE ON
PUBLIC WORKS AND TRANSPORTATION
HOUSE OF REPRESENTATIVES
ONE HUNDRED FIRST CONGRESS
SECOND SESSION

SEPTEMBER 28, 1990, IN DECATUR, GA

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FRIDAY, SEPTEMBER 28, 1990

House of Representatives,
Subcommittee on Water Resources,
Committee on Public Works and Transportation,
Decatur, GA.

The Subcommittee met, pursuant to call, at 9:05 a.m., in the Auditorium, Manuel Maloof Center, 1300 Commerce Drive, Decatur, Georgia, Hon. Henry J. Nowak (chairman of the subcommittee) presiding.

Mr. Nowak. The Subcommittee on Water Resources will please come to order. If everybody would like to take seats in back so that we could begin the hearing and accommodate as many witnesses as we possibly can.

Today, the Subcommittee on Water Resources meets to receive testimony concerning water supply needs of the Atlanta region.

Water from the Chattahoochee River and Lake Lanier were essential to the establishment of Atlanta as a major urban center in this country. Atlanta regional economists expect this growth to continue well into the future. While growth may be good for the economy, the added population is expected to require significant increases in water use.

In the past, the Chattahoochee River and the rest of the rivers in the Apalachicola-Chattahoochee-Flint river basin were capable of meeting the needs of all the residents of the region. However, with population growth throughout the region, and increased water demand, concerns have arisen over the system's ability to continue to meet all of these needs.

While a resolution to this upstream-downstream conflict may be possible, a clear understanding of the local water supply demands is essential to developing a workable solution.

Testifying today before us are several individuals from the Atlanta region to help us develop a clearer picture of the water supply needs of the Atlanta region. We have a range of witnesses representing business and environmental interest, and both local and federal governmental concerns. We look forward to hearing from all of them.

Before we hear from our first witness, I wish to thank my colleague, Congressman Ben Jones, who represents the fourth district, and acknowledge his great interest in this matter ever since he entered the House. I would like to at this time yield to my colleague for whatever opening remarks he wishes to make.

Mr. **Jones**. Thank you, Mr. Chairman.

As you know, I requested that you and the Committee hold this hearing today to provide a comprehensive snapshot of the long-term water requirements of metropolitan Atlanta and that impact on water users who are upstream and downstream from Atlanta and on our neighbors in Florida and Alabama.

As many of you know, reallocation of Lake Lanier is the recommended water supply alternative for our water requirements through the year 2010. I strongly support the proposed reallocation.

An adequate water supply is essential for our state's growth and continued prosperity. If a permanent solution through reallocation for water supply is not finalized, growth will be curtailed. This could impact the economic future of the state which stands to lose an estimated 680,000 jobs, $127 billion in wages and $8.2 billion in state revenues. This would harm all Georgians and all residents in the southeast.

In the media recently, we have heard a great deal of the, quote-unquote, "water war" between the States of Georgia, Florida and Alabama. From the data I have reviewed, I understand that by the time the Chattahoochee goes by Columbus, Georgia, its average flow is more than three times that of Atlanta—in other words, more than three times the quantity of water is available. It is much more when it passes Columbia, Alabama and by the time the Apalachicola crosses the Florida border its average flow is nearly 12 times that of Atlanta. And according to preliminary estimates of the 1990 census, the population of the counties in Alabama depending on the Chattahoochee is 287,476 and in Florida it is 117,600. The Atlanta Regional Commission estimates Atlanta's population at well over two million.

So the population into Alabama which is dependent on the Chattahoochee is a fraction of that of Atlanta, yet they have more than three times the water. This is even more true for Florida.

The State of Georgia has said Atlanta's proposed water use would only reduce flows at Columbia, Alabama by five percent and less than one percent before the Apalachicola empties into the Gulf of Mexico. So there is no need for a water war. With effective water management and conservation by Atlanta and the State of Georgia, there is more than enough water to satisfy all the water supply demands along the Chattahoochee and Apalachicola.

Mr. Chairman, I thank you so very much for coming to Decatur, Georgia today. We welcome you and the Committee here and we thank you very much for holding these hearings.

Mr. **Nowak**. Thank you very much, Congressman Jones.

I want to introduce Arlan Stangeland from Minnesota, our minority leader, for any statement he would like to make at this time.

Mr. **Stangeland**. Thank you, Mr. Chairman.

First let me commend you and Congressman Jones for your leadership on this issue. Certainly it would be an understatement to not emphasize the importance and the concern of Congressman Jones, a very active member of the Water Resources subcommittee, in his concern for adequate water for this part of Georgia.

You know, it is very interesting. We are here on a very interesting topic that has been a very prime topic throughout history. You go back in ancient history to the time of the Roman Empire and they recognized the need for water, vis-a-vis the aqueducts they built and the water transportation system they had. You read countless articles of when we settled the west amd the water battles that ensued.

Just recently I was in Phoenix, Arizona, a very arid part of the southwest. There was a discussion there amongst some people there that looming on the horizon was a battle over water use for that area, whether it should be used for irrigation purposes or whether it should be used for human and industrial expansion consumption.

Just recently—in fact, Wednesday—we had a very contentious debate on water usage from members of Congress from southeast Virginia and members of Congress from western Virginia and North Carolina with southeast Virginia wanting water for Newport News and Norfolk and members of North Carolina concerned about the lowering of Lake Gaston.

So it has been a contentious issue and nothing I guess raises the hackles more than water, whether it be available potable water for use or whether it be flood control and flood waters that do damage from one jurisdiction to another.

I am certainly pleased to be here to get more information. We know that water is important, we need to find a common ground so that those areas that have adequate water will be able to share that water with those areas that do not have water, without doing serious harm to those who give up that water.

I live up in a Great Lakes state, as does Congressman Nowak, and of course many times the southwest has cast very jealous eyes at our availability of water and it was not more than about a year and a half or two years ago that I had members from California, from the business segment, come in and propose to me a long-term proposal to pipe water from Alaska into southern California. So we know water is extremely important, there is a great deal of concern about it.

I am pleased to be here and I look forward to the testimony. Thank you, Mr. Chairman.

Mr. NOWAK. Thank you very much, Arlan.

We will move to our panels, and we are going to, for the convenience of some of the panelists, take some of these out of order. And we are going to move to the second panel, and we will do it by having all the panel members come to the table and individually give their statements. Then we will have the opportunity to ask any further questions after that testimony is given.

We are going to start with the second panel from the Atlanta Regional Commission, Manuel Maloof, who is the Chief Executive Office of DeKalb County Commission. If Commissioner Phil Secrist would also join him, he is the Chairman of the Cobb County Commission; Commissioner Ray Varner is here, Chairman of the Newton County Commission and we also have on this panel Walter Stevenson who is the Chief of the Natural Resources Development Department of Economic and Community Affairs, State of Alabama.

If you gentlemen would come forward, we will be happy to receive your testimony in the order that you are listed on the program.

Mr. STANGELAND. Mr. Chairman, while the panel is being assembled, I would ask unanimous consent that the statement of Congressman Bill Grant be made a part of the record at this point. As you know, we will be going to Tallahassee tomorrow to further a study of this problem in the district of Congressman Grant.

Mr. NOWAK. Without objection, so ordered.

Mr. Maloof, if you would like to begin your testimony. Let me just remind everyone that we do have a lot of witnesses. Your statements, written statements have been received and will be made part of this hearing record and we will let you proceed as you so desire.

[The prepared statement of Mr. Grant follows:]

STATEMENT OF CONGRESSMAN BILL GRANT

SUBCOMMITTEE ON WATER RESOURCES

SEPTEMBER 28, 1990

DECATUR, GEORGIA

First, let me begin by congratulating the City of Atlanta on being selected as the site of the 1996 Summer Olympic Games. This is a tremendous achievement that will benefit all of us in the Southeast.

As you know, the issue at hand today is the reallocation of water from Lake Lanier. There is no disagreement that the City of Atlanta needs more water. However, those of us downstream are concerned about the impacts of diverting massive quantities of water, the quality of the treated water returned to the Chattahoochee River, and the impact of these changes on this delicate ecosystem. Our seafood industry, as well as navigation, hydropower and many other interests will all be fundamentally affected.

Those of us downstream should not be forced to pay the price of Atlanta's unchecked growth.

Apalachicola Bay yields 90 percent of the oysters consumed in Florida and 10 percent of those consumed in the nation.

Oysters are heavily dependent on a constant supply of fresh water delivered to the bay by the Apalachicola River. A decrease in the freshwater input leads to higher salinity in the water.

Studies conducted by the Florida Department of Natural Resources conclude that a higher salinity environment encourages predation and disease from other marine organisms. As some of the Members will hear in testimony tomorrow, this is a problem our oyster industry can ill-afford.

In the last five years our area was hit by two hurricanes. In addition to property losses in the millions, the storms nearly destroyed these sensitive oysterbeds. In 1987 approximately 655,000 oysters were harvested in Apalachicola Bay. In 1988, only 231,000 were harvested, a decline of 65 percent.

The recent drought conditions experienced in so much of the Southeast in recent years have taken their toll as well. It is abundantly clear that a sufficient volume of water flowing into Apalachicola Bay is vital to the continuation of the North Florida oyster industry.

It is important to note that as vital as the seafood industry is to Northwest Florida, the Corps' present authorization and its Post Authorization Change Notification Report fail to address the impacts of the reallocation on this industry. At the conclusion of these hearings, I plan introduce legislation to remedy this problem.

I also believe that this report fails to adequately address the environmental impacts. The Apalachicola river, which was designated as an Outstanding Florida Water in 1982, has the greatest number of endangered plant species of any area in Florida. The ACF System is just that -- a system -- and any proposed changes must take into account the interests of all three states involved. To manage this system in a piecemeal fashion on a short term basis is simply not acceptable.

As you know, tomorrow this subcommittee will travel to Tallahassee, Florida, to receive further testimony on the downstream impacts of this proposed reallocation. We will take testimony from Florida and Alabama state agencies, representatives of the seafood industry, rural electric cooperatives, environmental groups and navigation interests. I invite as many of you as are able to come to my district for this hearing. I believe it will give the Members and others interested in this issue a balanced view of the problems we are facing.

TESTIMONY HON. MAYNARD JACKSON, MAYOR, CITY OF ATLANTA; MANUEL J. MALOOF, CHIEF EXECUTIVE OFFICER, DeKALB COUNTY COMMISSION AND VICE CHAIRMAN, ATLANTA REGIONAL COMMISSION; PHILIP L. SECRIST, CHAIRMAN, COBB COUNTY COMMISSION; ROY L. VARNER, CHAIRMAN, NEWTON COUNTY COMMISSION; WALTER B. STEVENSON, CHIEF OF NATURAL RESOURCES DEVELOPMENT DEPARTMENT OF ECONOMIC AND COMMUNITY AFFAIRS, STATE OF ALABAMA

Mr. MALOOF. Thank you very much, Mr. Chairman, and welcome to DeKalb County and Decatur, Georgia. And you are in our county auditorium and we are delighted to have you.

I appreciate this opportunity to come——

Mr. NOWAK. I was trying to figure out who this was named after, but I——

Mr. MALOOF. Well somehow or another——

Mr. NOWAK. You have a very close name.

Mr. MALOOF. Well I am very proud of that.

I speak in this instance as the Vice Chairman of the Atlanta Regional Commission and I appreciate the opportunity to come before you today to discuss one of the most critical issues ever to face the Atlanta region. This region's long-term water supply is a pivotal issue on which rests the future economic viability of the Atlanta region and to a great degree the State of Georgia.

Water is a precious resource to many areas of this country. It is especially precious to the people of the Atlanta region because when you realize it is a finite resource. The region's streams are generally small except for the Chattahoochee River because of its location on the sub-continental divide. Ground water is also limited since the region rests on crystalline rock such as Stone Mountain granite.

The Atlanta region would have stopped growing years ago had it not been for the vision of leaders like Atlanta Mayor William Hartsfield and Senator Richard Russell, who planned and then achieved construction of Buford Dam and Lake Lanier.

Gentlemen, let me just take a moment and digress—I am a native of the area and when I was a kid, water would get that scarce that they would have to go out and bring the bulldozers in to squeeze the Chattahoochee to get enough water out of it. And that literally happened. So having that lake there saved our lives. We would never have done anything if that lake had not been built.

This Federal Corps of Engineers project has made it possible for Atlanta to build itself from ashes to become one of America's fastest growing and economically viable cities, the world's choice to host the 1996 Olympics.

The original document authorizing the Buford Dam-Lake Lanier project clearly indicates that water supply and water quality for the Atlanta region was the purpose of the project. Further, documentation shows that increased off-peak releases for future Atlanta region water withdrawals was fully intended for the project. We now need those additional releases and are ready to fully realize the vision of our former leaders.

This is now a newly found conclusion. The Atlanta region's leaders have been working in good faith with the U.S. Army Corps of Engineers and other federal entities for nearly 20 years to identify an adequate long-term water supply for this region. In 1972, Congress authorized the Metropolitan Atlanta Water Resources Management Study to develop a long-range water supply management plan. The study verified that indeed the Lake Lanier-Chattahoochee River system was the only reasonable major source of water for the Atlanta region and studied many alternatives for its management.

While all the alternatives were being studied, temporary arrangements were set up in 1975 through MAWRS to increase water supply releases for the Atlanta region until a permanent solution could be put in place.

The most recent temporary contract expired in 1989. A new temporary contract has been prepared and is ready for signature by the Army Corps of Engineers but is being held up by the current legal issue between the State of Alabama and the corps.

What we have here today, ladies and gentlemen, is a rising star among American cities being held hostage by those who would question the integrity of almost 20 years of study by the Corps of Engineers and untold hours of effort by this region's public and private leaders. At this point, the Atlanta region does not have a guarantee that it will receive even the water it needs next week, much less what it will need 20 years from now. We are being penalized by others who have not done their homework. It is truly a tragedy that this is happening.

Today, the Atlanta region is home to over 2.4 million people. During the decade of the 1980s, this region led most American cities to post a 33 percent increase in its population. At the same time, the region added nearly 500,000 new jobs or almost one job for every person who came to our region. By the year 2010, the Atlanta region is forecast to be home to more than 3.7 million Americans.

We have been called the city too busy to hate. We have set our sights high and we have achieved what many thought to be impossible. Our people have a can-do attitude, but we know we cannot do without an adequate water supply. It truly is our lifeblood. We are asking only for the amount of water that we will need, not an excessive amount.

Our citizens have proven their commitment to water conservation through adhering to stringent water restrictions through hot, dry periods. Local governments have adopted low-flow plumbing ordinances, pricing schedules to promote water conservation and are incorporating water-efficient landscaping in government facilities. We are also spending billions of dollars to make sure that the water that we put back into the river is clean.

I would also take this opportunity to set the record straight. The Atlanta region would never pursue an alternative to secure its long-term water supply at the expense of its up- or down-stream neighbors. The Corps of Engineers' study plainly shows that the impact of reallocation on other users of the system will be insignificant. In fact, reallocation of Lake Lanier works much the same way as building a rereg dam below Buford Dam, a prior recommendation by the corps, only it is not environmentally damaging. Yet our neighbors never voiced opposition to building another dam on the Chattahoochee.

As negotiations continue between Georgia, Alabama, Florida and the Corps of Engineers, the Atlanta region's future is put on hold. The damage created by this dispute may already be irreparable.

I would ask you to open your minds and your hearts today as you listen to the ensuing testimony. The well-being of a world-class city and a great state may be resting in your hands.

Thank you very much. That was in my role as the Vice Chairman of the Atlanta Region. I have got a very short statement as the Chairman and CEO of DeKalb County. I would like to be able to read this to you.

I am speaking to you today to request your endorsement of the regional water supply plan for the Atlanta region. This plan has been adopted by the Atlanta Regional Commission. All of the political jurisdictions in the Atlanta region participate in the ARC and endorse the water supply plan as the best opportunity for supplying water to the Atlanta region for at least the next 20 years.

The Atlanta region is and will be one of the largest employment centers in the southeast, with over 2.3 million jobs in the region projected for 2010. An employment base of this size is important to the United States as well as the southeast economy. An employment base of this size demands a tremendous water supply. Year 2010 water projections indicate that 550 million gallons of water will be needed on an average day with peak days much higher. That is a tremendous demand for water and there are very limited water resource alternatives. These alternatives rely primarily upon Lake Lanier, the Chattahoochee River and Lake Allatoona. The Atlanta region has no significant ground water, and other surface water supplies are both much smaller and already committed to other users. The Atlanta region has begun conservation measures and will do more, but this will not be sufficient to meet growing demand.

The U.S. Corps of Engineers has already determined through a thorough planning and engineering effort that reallocation of Lake Lanier will be the best way to protect the downstream environment while still ensuring adequate water needs for the metropolitan Atlanta area. This planning and engineering effort began 17 years ago in 1973 and resulted in the corps first recommending the construction of a rereg dam and later the reallocation of Lake Lanier. The reallocation plan will provide additional water without endangering minimum river flows. It would be irresponsible to study this matter for another five or more years while denying this region sufficient water.

We need the U.S. Congress to endorse the Corps of Engineers recommendation as adopted by the ARC and the local governments. This endorsement will enable the region to provide water to a growing economy for the next 20 years.

And with this statement I have given you a chart that hopefully you will look at and get some sense of the water usage of the region.

Thank you very much for allowing me to testify this morning.

Mr. **Nowak**. Thank you very much. We will withhold questions and will turn to Commissioner Phil Secrest.

[The prepared statements of Mr. Maloof appears on p. 101.]

Mr. **Secrist**. I want to thank the Subcommittee on Water Resources for this opportunity to speak before you. We here in the Atlanta area are very concerned that we have adequate water resources to plan for the influx of the population that we know will be coming our way in the next five, ten, 15 years.

Cobb County is one of the five most populous counties in the Metro Atlanta area with over 450,000 people. We have been experiencing a tremendous growth in the last five years, which our population has more than doubled.

I would like to read a statement today representing the interests and concerns of Cobb County and I believe the metro Atlanta area. Certainly as a member of the ARC, we are privileged to join with them in planning regional needs.

Metro Atlanta must obtain more water from the Chattahoochee/Lanier system and Lake Allatoona or face severe curtailment in population and economic growth. Cobb County-Marietta Water Authority projects that in 20 years, water demand in its service area will double and over the next 50 years triple. The Water Authority has completed a water supply plan—this is the Cobb-Marietta Water Authority—a water supply plan for meeting its needs 50 years into the future. This plan calls for a combination of water conservation, wastewater reuse, ground water development and additional surface water supplies.

Much progress has already been made in the area of water conservation. The Water Authority created a full-time staff position for a water conservation specialist and coordinator in early 1989 and at present is the only water utility in Georgia with such a position. The person filling this position, Fox McCarthy, has been extremely active in the rapid development taking place in Atlanta and throughout Georgia in water conservation. He is currently present of the Georgia Water-Wise group, a newly formed nonprofit organization composed of members from the green industry, landscape architects, water utilities and so forth, that are a motivating and moving force behind efforts to conserve water, both inside and outside the home. They have also been instrumental in having the University of Georgia County Extension Service produce a booklet on "How to Xeriscape in Georgia". That should be ready for distribution by the first of next year.

ARC has been successful in passing three resolutions pertaining to water conservation. These are: 1) ultra-low flow plumbing devices for new construction; 2) summer surcharge pricing structure on water and 3) xeriscape requirements. These efforts should ultimately reduce metro Atlanta's water requirements by 10 to 20 percent.

Reuse of treated wastewaters for non-potable purposes, such as landscape irrigation, golf courses, industrial processes and so forth will help to reduce future water needs. Even though this approach has been successfully used in Florida and Arizona, California and so forth, it will have less overall applicability in Georgia because of our seasonal rather than year-round need in Georgia. Even so, it can bring about some reduction in water needs, especially with golf courses.

Until recently, ground water was not seriously considered as a major source of water in north Georgia because of crystalline bedrock subsurface which was thought to have a low water yield. The City of Fayetteville, however, recently drilled three wells that have a combined yield of 1.3 million gallons daily. The Water Authority is in the process of selecting a firm to identify potential well sites throughout Cobb County. It hopes to ultimately supplement its surface water supply with approximately 20 to 25 MGD from ground water. It is also encouraging new residential and commercial developments to drill wells for meeting irrigation needs rather than relying on surface water supplies. So you see, we are very aware and very sensitive to the need for alternative sources of water supply.

Even with the above-mentioned efforts, most of metro Atlanta's future water must come from existing (that is, Lanier and Allatoona) resources and future (12 EPD reservoirs plus others) that we have in the planning stage or actually under construction. Hence, additional reallocation of Lakes Lanier and Allatoona must occur. It is unreasonable, uneconomical and maybe impossible to meet all of Atlanta's future needs solely by water conservation, reuse and ground water. Furthermore, because of the wetlands regulations, new reservoirs requiring destruction of wetlands cannot be built until existing reservoirs (Lanier and Allatoona) have been used to their maximum reasonable extent. When all factors are considered, Lake Lanier and to an even larger extent Lake Allatoona, have not been fully utilized with regard to water supply. And let me add a footnote here and say that in Cobb County, we draw half of our water from the Lake Allatoona side of the county. The other intake is on the Chattahoochee corridor.

Limited modeling conducted for the Water Authority agrees with the Corps of Engineers conclusions that reallocation does not significantly impact downstream users. When considering the facts that: 1) 95 percent of the flows in the Chattahoochee River at the Florida line originate from rainfall and run off below Lake Lanier, and 2) that approximately 70 percent of the flow used by Atlanta is returned to the Chattahoochee River, the impact of reallocation on downstream flows is insignificant. During a worst case drought condition, flows at the Florida line would decrease by less than 0.5 percent. For most years, there is more than enough flow and hence no impact on any user including power producers and recreationists.

Furthermore, modeling indicated that if the corps operated Lake Lanier primarily for water supply rather than hydropower production, total energy production (primary and secondary) during a severe drought year would still be approximately 85 to 90 percent of that otherwise produced. Primary energy (firm capacity) under these conditions would probably be about one-half of that produced when operated primarily for hydropower production. Hence, significant energy production could still be realized when operated for water supply during severe drought years, and during most of the years there would be no power loss. The impact of other users would be greatly lessened by eliminating hydropower production as the primary mode of operation.

Regarding water quality, the Chattahoochee River is in much better condition today than it was 30 years ago as a result of the hundreds of millions of dollars metro Atlanta spent during the 1960s through the 1980s for improving wastewater treatment facilities. Additional improvements are forthcoming that will further improve the quality of the river. The City of Atlanta will spend in excess of $50 million in the near future to provide treatment of the combined sewer overflows. Atlanta and other utilities will also be spending hundreds of millions of dollars to provide treatment to meet the new phosphorus limits and other regulations imposed by EPA.

In closing, metro Atlanta is working hard to minimize its requirements for additional water from the Chattahoochee/Lanier and Allatoona through water conservation, wastewater reuse and ground water development. However, even with these measures, additional reallocation of Lakes Lanier and Allatoona and construction of additional regional reservoirs will ultimately be required to meet Atlanta's long-term needs.

I want to thank the Subcommittee for the opportunity to express my views today.

Mr. **Nowak**. Thank you very much, Commissioner. We will follow our procedure and go to Commissioner Roy Varner, who is the Chairman of the Newton County Commission.

[The prepared statement of Mr. Secrist appears on p. 121.]

Mr. **Varner**. I would like to thank, on behalf of Newton County, we being the little community that is farther out on the eastern edge of ARC, not in the ARC, but we are very much interested and see the effects and the benefits of the Chattahoochee for our area as well. We certainly want Atlanta and the ARC to have all the water they want, but not come out and override us, overrun us in ours because it is hard enough for us to keep up with what we have got.

I think Commissioner Maloof and Commissioner Secrest have very much covered the territory this morning of the larger communities. And without me repeating and going through everything that they said, I am saying I am very appreciative of the Committee coming, hearing us and seeing our needs, hope to be able to be in a position to assist you any way we can in implementing the things that you need to take from a community of 40,000-50,000.

Thank you very much. You have my complete summary up there with you, so in the interest of time I will just say thank you for allowing me to be here and make this presentation.

Mr. **Nowak**. It certainly will be made part of the record at this time.

We would—Mr. Stevenson, before we hear your testimony, we would like to hear from the mayor who is waiting, so if Mayor Jackson would like to come and put his testimony in, we would welcome the opportunity.

Mayor, congratulations, I understand you are going to host something in 1996 that you worked very hard for.

[The prepared statement of Mr. Varner appears on p. 198.]

Mayor **Jackson**. Thank you very much, Mr. Chairman, good morning to everybody. It is a real pleasure to be with you and especially to be in Congressman Jones' District. Chairman Nowak, it is a pleasure to join my colleagues here and to be in the Manuel J. Maloof Center. They will not let us name things after us in Atlanta, but I am on Chairman Maloof's side. I just want you to know that. [Laughter.]

Mr. Chairman, I come offering for the record my testimony as the official statement that I have to make today. I do not intend to read that entire statement and I am sure you do not want me to, but that is the statement by which we stand. There are a couple—we may submit a corrected copy, probably will, to conform to the remarks that I will make today. To any extent that the remarks that I make orally conflict with the written testimony, the oral remarks will control please.

Mr. Chairman, when I was first back in office in January of this year, having served as Mayor from 1974 to 1982, January, out for eight years and back as a brand new mayor in January of 1990—within the first week that I was back in office, a contract hit my desk that left me in a state of shock. It was a contract to pay three hundred and sixty some odd thousand dollars, approximately, to the U.S. Army Corps of Engineers to reserve an allocation of water for the City of Atlanta in Lake Lanier.

I looked at the contract, I called some people in and I said, "My God, what in the world is this—what is this?" And then began the saga of my realizing there were four new issues that were not there when I left office before—drugs, to the extent that they were not recognized as a major urban issue by the time that I left office in 1982 in January because there had not been crack, crack had not come onto the market until 1985; homelessness, when I left office we had 900 homeless and now we have about 9,000, not considered to be an urban issue at the time; AIDS, which had not been defined when I left office; and issue number four is what brings us together today—water.

Mr. Chairman, I join with these distinguished members of the Atlanta Regional Commission and others who are equally concerned, in expressing to you that the metropolitan area of Atlanta is trying its best to obey the law, but rather are the victims in many ways of changing federal mandates.

At one time, we were told that combined sewer overflows were okay, so we built them. After then, we were told no, they are not okay, so we had to change them. That is a big proposition, Mr. Chairman—big proposition. We had six to do, we have got two done, four to go and we are working on those. And we are talking about tens and tens and in some cases hundreds of millions of dollars to make the changes. But we are trying our best.

In addition, we have a growing region, a region whose primary challenge, as I see it, is in the area of water management. Water supply may not be the real issue here, but water management may be. We live on a river that is the primary source of water for the City of Atlanta—not just metro Atlanta, but the City of Atlanta which I represent today.

We are proud to welcome you to the city—almost to the City of Atlanta and to metro Atlanta and to Georgia.

We find ourselves not wanting to restrain our growth because of water, committed to channeling and guiding our growth to ensure quality and simultaneously being very conservative. We do not want our neighbors like Alabama and Florida to think we are bad guys—we are not. We are not insensitive, we are not uncaring. This is an issue that has caught almost everybody by surprise. So together we are trying to find the right way to solve our problems.

When I realized that our city was subject to the decisions of the Corps of Engineers—and with great respect for the U.S. Army Corps of Engineers, nevertheless, no matter who it might have been, a reaction that was dictated by the circumstances which I felt incumbent to pursue as mayor was to get busy to finding options. And that is what I did about five days after I signed that contract I mentioned the first part of my remarks.

We got together with our senior managers and ordered an options study and that is underway right now. We got together with ARC and together united formed an agreement as to how we were going to approach the issues of the moment as well as the long-range planning. Our long-range planning frankly has always been pretty exemplary. We have not sat on our haunches and done nothing, we have been active. The Atlanta Regional Commission has done an outstanding job, we have a water plan. That is not the issue.

So what I would like to do today is to share with you what we are thinking about doing, to let you know we will work hand-in-glove with the Congress to get these issues solved but meanwhile we find ourselves in a situation that is untenable and unacceptable, and that is we cannot leave our future contingent on what might or might not be the rule of the day regarding the U.S. Army Corps of Engineers or even the federal government. We have got to have independent options and we are now in pursuit of those. We would like to pursue the ones that the federal government in cooperation with us will help us to reach—that is our preference number one. Let us be partners. This is America, we all represent the same people.

But while that is being decided, we are looking at, number one, regional reservoirs. The State of Georgia enacted legislation to authorize the Department of Natural Resources to develop a system of regional reservoirs that would increase the availability of water for communities in the northern part of the state.

How much time do I have, Mr. Chairman?

Mr. Nowak. Well we have four panels, Mayor, so we would like to try and conclude by 1:00.

Mayor Jackson. That will give me enough time, Mr. Chairman. [Laughter.]

Mr. Nowak. Somewhere near quarter of one would be fine, Mayor.

Mayor Jackson. All right, fine.

But another five minutes or so and I will——

Mr. Nowak. That will be fine.

Mayor Jackson. All right. I will cut those remarks short.

Development of this program of regional reservoirs is currently being hampered, Mr. Chairman, members of the distinguished panel, by EPA and the Corps of Engineers' interpretations of federal legislation governing development of areas designated as wetlands. This program is a key element to the state's strategy for providing a dependable supply of water for greater metropolitan Atlanta counties and to relieve the demands on current sources in the metropolitan area.

The second option we are exploring in the City of Atlanta—water reclamation. The new requirements for waste water treatment that have been imposed by the Georgia Environmental Protection Division and by the U.S. EPA, including limits for the discharge of phosphorus, will require area governments to construct additional treatment facilities that will produce a very high quality effluent. This high quality or reclaimed water could be used to meet many of the demands for water such as golf course and lawn irrigation. To use this type of water it would be necessary to construct a separate water distribution system, however. This approach has been successfully developed in other areas of the country and it will be fully evaluated as an alternative future source of water to meet partially the needs of the area.

The federal government, Mr. Chairman, could play a vital role in this effort on a national basis by encouraging the use of reclaimed water through support of research programs and by developing a sound program for public education.

Number three, if—and I urge everyone listening to this big "if'—if this did not impose in any way a straining on the Savannah River basis and the users of the Savannah River, if it did not impose a problem there, diversion of water from Lake Hartwell which feeds the Savannah River in the northeast area of the state, either to Lake Lanier or directly to Atlanta via dedicated pipeline, could provide an additional supply of water to meet future needs. But clearly before any action could be taken or should be taken on that, this alternative would have to be evaluated to determine the impact on the Savannah River, the operation of the Hartwell Reservoir project and the cities and counties that are dependent thereon. If there's any negative impact on any of those entities; cities, towns, the areas and that, we do not propose that as an alternative.

Number four, the Chattahoochee River below Atlanta—below Atlanta—the flow of the river below the Atlanta area is substantially higher than it is above Atlanta where the water supply is currently obtained. The higher flows are due to the increased watershed areas that flow into the river downstream from the metro Atlanta area. The improvements in water pollution control systems that have been made and that will be made during the next ten years could make this a viable source of additional water for our area. Essentially all water that would be withdrawn could be and would be returned either directly as treated waste water or indirectly where it was used for irrigation. Therefore, there would be no measurable impact on downstream uses.

Number five, water conservation. As the demands for water increase, this option becomes increasingly important and it becomes important to educate our customers as to the need to conserve water and to use it where it is available. The area governments are recognizing the importance of providing information to the public and to require water-saving devices and appliances where feasible.

And next, Mr. Chairman, is what I propose could be done. It is the toughest option but might be made easy and could be made maybe the most usable option if, and only if, the federal government became an on-stream partner with the governments represented here today. And that is desalination.

Mr. Chairman, I have asked our government to explore the possibility of putting a desalination plant on the Atlantic Ocean and running a big pipe all the way to the Atlanta area and selling water. We do not have to do it alone as a city government, we could do it as a metro region. We could be an authority, we could be what we really are in many ways in that we now sell water to our constituents.

The problem with it is cost. But we could sell water all the way up and down that pipeline, all the way from the Atlantic Ocean to the metro Atlanta area. Nobody is hurt, the only negative is cost. The possibility of constructing a desalination plant in a coastal city and piping the water to the Atlanta area has been investigated by us on a preliminary basis. The cost of constructing such a facility and the transmission system to provide the water to this area was estimated at approximately one billion dollars and the cost of operation was estimated at approximately $100 million per year. This cost is more than four times the cost of all the alternatives of water supply and therefore we, as a city alone, cannot continue to consider this as an option.

So I bring it today to say that as a cooperative effort of federal, state, area and local governments, it might make sense—it might make sense. Many nations do this. Our own government is doing this right now in the Far East to get water for our troops. The technology is not the issue, the cost is.

The next option is ground water. Evaluation of the cost/benefit and availability of ground water supplies and ground water recharge as a means of augmenting surface water supplies.

And then river basin management—a very important issue that I believe—I do not have time, I am running out of time, so I will not stand on that, but water supply withdrawals are currently limited at all times to ensure that required low flow levels are met, however, evaluations should be made to determine the impact of allowing higher withdrawals during higher river flow periods, which could be stored by the water utilities to meet supply needs at other times. So mandated off-system storage could provide consistent supplies during low river flow conditions or periods of high demand in excess of withdrawal permits. Saving up to meet a non-rainy day, in other words.

Mr. Chairman, on the question of water quality, we have a lot to say on that issue but my time has run out. We stand on the testimony I have made except where the oral remarks differ, and we ask you to have the record to incorporate my remarks.

Mr. **Nowak**. We will incorporate that.

Mayor **Jackson**. If there are any questions, I will be more than happy to respond.

Mr. **Nowak**. Thank you very much, Mr. Mayor, for a very complete answer to a very complex question. I am very happy you have taken the time to come and develop, as you have in your testimony that we briefly looked at, the other options that are being pursued. It is very helpful, perhaps not on the corps direct question as far as the court proceeding is concerned, but overall to see what you are pursuing.

Let me turn to our last witness on the panel and then if I could, Mayor, I would like to ask all the panelists some questions concerning all the testimony because there was certainly a common thread running through it. And I would turn to the last witness, I think we would all be interested in hearing from Walter Stevenson, who is Chief, Natural Resources Development Department of Economic and Community Affairs, State of Alabama.

[The prepared statement of Mayor Jackson appears on p. 88.]

Mr. STEVENSON. Good morning, Mr. Chairman, members of the Subcommittee, I am Walter Stevenson, Program Manager of Natural Resources Section, Alabama Department of Economic and Community Affairs. I have with me to my immediate left, Mr. William Cox, Special Assistant Attorney General for the State of Alabama.

The Alabama Department of Economic and Community Affairs, which I am a 25-year career employee of, is an executive branch agency directly responsible to the Governor of Alabama. I am presenting comments today on behalf of Governor Guy Hunt.

It is a pleasure to appear before this Subcommittee on Water Resources and have the opportunity to assist in creating a better understanding of Alabama's perspective regarding regional-interstate water resource issues impacting Georgia, Florida and Alabama.

The Subcommittee's present concerns center around the Army Corps of Engineers' proposals to reallocate water storage at various federal projects located on interstate streams for the exclusive use in Georgia. Let me begin by assuring the Subcommittee that it is not Alabama's intent to hinder the use of interstate streams by any entity for beneficial uses, but to ensure that downstream users and interests, including southern parts of Georgia, Florida and specifically Alabama, receive equitable access to and distribution of these same finite water resources and to protect current and future economic and environmental interests. Because the proposed reallocations involve a huge quantity of water—106 percent of the amount the entire State of Alabama used for public water supply in 1989—they must be properly analyzed and evaluated.

The proposed reallocations of water storage at Lake Lanier in the Chattahoochee-Apalachicola River Basin and at both Carters Lake and Lake Allatoona in the Alabama-Coosa River Basin, all concern federal reservoirs which were designed as integral parts of a total river system and are located in the headwaters of interstate rivers. These federal projects were designed as integral parts of a total river system to support specific project purposes which were approved by the Congress. The Congress also approved construction financing for the projects and continues to support these projects' purposes today by funding their operation and maintenance. The reallocation would modify the original congressionally authorized primary project purposes at all three federal reservoirs. The Corps of Engineers, even with these and other federal projects on both river systems, have historically had problems operating the river system to meet their Congressionally approved purposes. This has been primarily due to the lack of water and/or flows to support the authorized and funded purposes of the river systems.

The reservoirs, with their corresponding reallocations, are located in the head waters of interstate streams flowing from Georgia to Alabama and Florida. These reservoirs contain significant portions of the total storage in each basin. The storage is vital to the respective river systems.

The reservoirs provide support for the Congressionally authorized purposes, such as navigation, hydropower production and the augmentation of downstream flows necessary to ensure the economic and environmental well-being of the entire basins when normal flows are insufficient.

The Army Corps of Engineers has undertaken studies of the proposed reallocations. The corps has released draft studies for Lake Lanier and Carters Lake for public review and comment but has not yet released the draft study on Lake Allatoona. The State of Alabama has filed substantial comments regarding the draft report and the lack of corresponding full environmental impact statements for Lake Lanier and Carters Lake. We have previously provided copies of our written comments to the Subcommittee and I now reiterate our request that Alabama's comments on these studies be made a part of the Subcommittee's record.

Alabama's comments addressed issues such as the failure to consider downstream impacts, lack of comprehensive water resources planning for all uses for an appropriate time period and use of a planning and review process which failed to meet the Corps of Engineers internal requirements and the National Environmental Policy Act. Alabama continues to contend that insufficient, reliable data is available upon which to base prudent, interstate water resource decisions at this time. This is why Alabama continues to support the proposed interstate comprehensive plan, which I might note was proposed by the Corps of Engineers in response to a Congressional request. This study will assess the cumulative impacts of the proposed reallocations. The comprehensive plan should also assess the impact on the basin as a whole and survey the water resource needs of Alabama, Florida and Georgia in light of the limited resources available. To date, Georgia has failed to indicate they will participate in this process. Alabama has initiated a water resources planning and management study that will provide guidance for our input to the comprehensive plan.

Without such comprehensive and reliable data, any actions would be premature and result in perpetual, irrevocable harm to down stream economic and environmental interests and the users of these interstate water resources—not only in Alabama and Florida, but also in Georgia. Alabama believes its requests are reasonable and capable of substantiation to the point that Alabama has filed suit against the Corps of Engineers in United States District Court. I am requesting that a copy of the complaint filed by the State of Alabama and previously made available to the Subcommittee also be made a part of your records.

I hope that the Subcommittee reviews Alabama's written comments regarding the proposed reallocations in detail and concurs that the data available is not comprehensive and uniformly accepted by the states as reliable. Given these circumstances, any attempts at this time to base congressional action or approval of the proposed reallocation on the existing limited data and analysis should be deferred to avoid serious conflicts with existing federal mandates including the National Environmental Policy Act. I also hope the subcommittee agrees that the course of action presently being followed to address these regional-interstate issues is just and that it will result in a local and equitable resolution of the current interstate water resource issues impacting Georgia, Florida and Alabama.

If the subcommittee needs additional information or further details, our office, on behalf of Governor Hunt, will be happy to respond.

Gentlemen, I thank you for your attention and time and will be happy to respond to any questions you may have.

[The prepared statement of Mr. Stevenson appears on p. 163.]

Mr. NOWAK. Thank you very much, Mr. Stevenson. And you said you have Mr. Cox with you. My understanding is that the lawsuit is now stayed by agreement with all the parties including the intervening parties, which were not accepted into the lawsuit—that proceeding, that question is also stayed, is that correct?

Mr. COX. The status of the lawsuit, sir, is that the State of Alabama and the corps, which were the only two parties to the suit at the time, filed a joint motion to stay the litigation, and that was accepted by the court. There was some opposition to it, but the court went ahead and granted that stay and it is in effect stayed at this time.

Mr. NOWAK. And the latter part of my question regarding intervening parties.

Mr. COX. Those have been put on hold and have not been decided by the court.

Mr. MALOOF. The ARC, sir, did in fact list some objections to the stay based on the reasons given for the stay and certain applicable impacts on the ARC were not incorporated in that stay and so we did object to it, even though we were not a party to the suit—and we still object to it.

Mr. NOWAK. Mayor, I just want to make a couple of statements here as we go through. We are going to have a time problem I know, but in looking a little on the lighter side, the success that you have had with the Olympic Committee, I just want you to know that I represent Buffalo, New York, and all the athletes that are going to come to your 1996 games will be in Buffalo in 1993 for the World University Games extravaganza, and I want you to invite you to see the athletes before they come, as they prepare their careers to of course win an Olympic medal.

The statements concerning the lawsuit I think are particularly important. And if we could have all the pleadings that have been filed and the decision of the Court as of this moment, I would be appreciative, so we could incorporate all of that in the record. And with Mr. Jones' interest, I am sure we will be following this case over the next several months as that negotiation goes forward.

We have been aware in recent years—Mr. Stangeland mentioned a couple of other problem areas where you have not only intrastate problems, but interstate problems. We go through the Missouri Valley and where in years of adequate rainfall without drought occurring over succeeding seasons, many of the old water control programs have worked very well. The corps has been able to make minor adjustments administratively in some cases.

We see, however, that over the last ten years—there is some attribution to even the greenhouse effect—changes, dramatic changes in rainfall, where it is happening, some areas are being flooded. And we have also, of course, over the last 40 years, as you have here in the Atlanta region, changed, like perhaps in the midwest prairie land has become farm land. The farm land that was 30 years ago has become suburban living and suburban area of 30 years ago has become populated in an urban setting. And all of those changes of course have had great impacts upon the water resource program, distribution and the Corps of Engineers.

We will, I am sure, hear more and more of the same kinds of concerns being expressed almost in every area of the country. So yours is not unique and it is certainly encouraging to see that you have negotiated a stay to start looking at these questions to see if we cannot—you cannot, the states, the people, that are being affected, come to a decision——

Mayor JACKSON. Mr. Chairman——

Mr. NOWAK. Yes, Mayor.

Mayor JACKSON. I am sorry, when you finish.

Mr. NOWAK. And I just want to tell you, you are not alone, we are starting to review all of these and just passed the water resource bill the other day in Congress. Section 16 of that bill calls for a review of many of the Corps projects throughout the country and they will be looking at the total allocation needs and where changes are going to be necessary, we will have perhaps a wider public input than had been looked at in the past because of greater interest from all different various interests in all these areas. They change, we do not stay static and we are going to have this movement, so-called target, ahead of us for some period of time. We want to just make you aware that, first of all, you are not alone, and secondly, Mr. Jones has had substantial input into your problems and of course we have been kept up to date.

Mr. Mayor.

Mayor JACKSON. Mr. Chairman, I have heard the comments by the gentleman from Alabama and we just want him to know that we are working hard—we believe the way to handle differences is not in court. We believe the way to handle the differences, frankly, is mediation or arbitration, and coming together as neighbors, because what happens to us happens to Alabama in so many ways. The Olympics coming here in 1996 will dramatically improve the prospects for economic development and commercialism and tourism for every state in this region. So this is not just for one.

Our requests, Mr. Chairman, are not changed at all by that testimony and they are five: (1) To approve legislation to reauthorize the operation of Buford Dam to include storage for drinking water supplies and authorized use.

(2) To authorize the short- and long-term reallocation of storage in Lake Lanier and Lake Allatoona.

(3) To review the policies that have been adopted by the EPA and the Corps of Engineers in implementing the requirements of federal legislation governing the protection of wetlands.

(4) To authorize state and federal governments to locate a major water storage facility to meet the regional water supply needs beyond the year 2010.

(5) And finally, to encourage the development of federal legislation and EPA regulations to establish comprehensive and consist-

ent policies and approaches for water quality standards for all sources of water pollution.

We are doing all we can in water quality and water quantity. We have spent over $300 million alone on the CSOs.

And the final thing I will say, Mr. Chairman, is I used to sell encyclopedias in Buffalo, New York. [Laughter.]

Worked out of the Benderson Building on Delaware Avenue.

Mr. **Nowak**. The Bendersons are still there and I read every one you sold us.

Mayor **Jackson**. We look forward to the 1993 Buffalo games and I will be there.

Mr. **Nowak**. Thank you very much.

Let me turn to Arlan Stangeland for any comments he would like to make.

Mr. **Stangeland**. Thank you, Mr. Chairman. I think this testimony has been excellent and very helpful. I just have a very few questions.

Does Atlanta—number one, does Atlanta draw water at all from the Chattahoochee at the current time?

Mayor **Jackson**. Yes, we do, that is our primary source of water.

Mr. **Stangeland**. That is your primary.

Mayor **Jackson**. By Atlanta, when you say Atlanta to me, as Mayor of Atlanta, I mean the City of Atlanta. As far as metropolitan Atlanta, the answer is several governments pull from the Chattahoochee River, but not all.

Mr. **Maloof**. Gwinnett County does, sir, out of the lake, but that is considered the river. Cobb County is the only county that I know of that takes part of their water out of the Allatoona and part out of the Chattahoochee. My count, DeKalb County, is totally dependent upon the Chattahoochee for its water. Fulton County is also totally dependent upon the Chattahoochee for its water. There are five governments—four that are totally dependent upon the Chattahoochee and one that splits it between the Chattahoochee and the Allatoona.

And the other circumstance involved there is that we, the five governments, also furnish water to many other governments as an offshoot from what we get out of the Chattahoochee. So even though those governments may not be here today, we are the supplier of their water, such as Rockdale County south of us, both Gwinnett and DeKalb County furnish them water; Henry County; Douglas County gets water from there. So we are all dependent upon it.

Mr. **Stangeland**. I get the picture.

Is there any limitation on how much water you can draw from the Chattahoochee?

Mr. **Maloof**. Yes, sir, we all have a set amount that we have a maximum limit to and if you get over that, you get hit pretty hard.

Mr. **Stangeland**. Initially when Buford Dam was constructed, was part of the purpose for municipal water supply?

Mr. **Maloof**. Sir, there was a lot of discussion—and again, I am going to draw back on my experience in the Atlanta region. For years, there was a desire to build something to give us some water and they had to figure out a way to do it. And while water supply was the main thrust of Mayor Hartsfield at the time, he had to incorporate, working with the Congress, the flood control and things of that nature, to get the dam built. That was the only way we could get the dam built.

There has been a name left out here today that I think needs to be remembered. There was a man named Tick Forrester, who was one of your Congressmen who worked with Mayor Hartsfield and Senator Russell to build that dam. But there was an ongoing fight to get that bill and Mayor Hartsfield saw the vision in it. If it had not been done, Atlanta would not—you know, all of us would not be here to the degree we are. But it was done primarily—whatever you want to read—for water supply for the Atlanta region.

Mr. STANGELAND. You were at that time part of the local sponsors and paid part of the cost of the construction of Buford Dam?

Mr. MALOOF. Well I cannot speak to that because I was not in the——

Mr. STANGELAND. That is one of those things I can get I guess——

Mr. MALOOF. I would say most of it was paid by the federal government, if the truth be known.

Mayor JACKSON. And by Georgia Power Company.

Mr. MALOOF. And Georgia Power Company.

Mr. STANGELAND. And then I am led to believe as well that Franklin, LaGrange, West Point, Columbus, Georgetown, Fort Gaines, Dothan, Eufaula in Alabama all draw water from the Chattahoochee.

Mr. MALOOF. Right.

Mr. STANGELAND. Okay. What is the status—can you give me an idea of the status—I would expect that the 2040 study is part of an arrangement or negotiation that Congressman Bevill implemented, am I correct in that assumption?

Mr. MALOOF. Well we were under the impression that the 2010—we were told pretty straight-forwardly, that the 2010 allocation would in fact be implemented while the 2040 study was being done. And now we have learned that that is not the case and that is what put us in that bind.

For your information, sir, I do not think something has been said here today. The Atlanta region, for years, went alone with whatever was told to them to do. We were told first that to get extra water we would have to build a rereg dam, which we agreed to do and agreed to pay the cost of that dam and let the Corps of Engineers build it. There was a great hue and cry from conservation groups, game and fish groups and environmentalists generally. So lo and behold, after we had agreed to pay to build the dam, to buy the land and do all that, the rules changed. So they said now if you want to, you can pay for the power usage of the dam to this power group rather than build a rereg dam. Which we said fine, if that is what you think we ought to do, we will pay for that, some $62 odd million would be shared by the five entities to pay for the power usage of the dam that was contracted by the utilities. We agreed to do that, all the time understanding that our allocation for 2010 would be happening.

So now we have got the 2040 study which has negated, as we see it, or held up, the 2010 allocation. So we kind of went along with everything everybody told us to do and at the last minute we got told, "Sorry brother, you cannot have it."

Mr. **Stangeland**. Well I thank you gentlemen, I thank you for your testimony. And I would ask unanimous consent that we might be permitted to submit written questions if later testimony reveals some area of interest that we want to pursue. But I thank you and I commend you for working together in an area, the State of Alabama as well as the State of Georgia and hopefully Florida, to resolve a very sticky problem. I am sure you appreciate your downstream neighbors are concerned about the camel's nose under the tent and long, long, long-term impacts. Not only potential long-term impacts, but the problem of potable water is essential for growth, and I commend you for some of the steps that you are taking.

Thank you.

Mr. **Nowak**. Thank you very much. Let me turn now to Congressman Ben Jones of the Fourth District.

Mr. **Jones**. Thank you, Mr. Chairman, and I would like to thank our panel, Manuel Maloof in particular. Last night coming down on the plane I found out that the minority counsel, Mr. Grumbles, was a graduate of Emory Law School and I said well we are going to be in the Manuel Maloof Center and have you ever been there. He said no, but I spent a lot of time in that other building named after Manuel. [Laughter.]

Mr. **Maloof**. That is the reason he is a good attorney.

Mr. **Jones**. I reminded Mr. Stevenson about Mark Twain's comment that whiskey is for drinking and water is for fighting. Well we do not want to fight, we do not think there is a need for this kind of fighting. There is plenty of water to go around, in our opinion and we want to be very hospitable to you today, more hospitable than the Bulldogs were to the Tide last week over in Athens and more hospitable than Bear Bryant was for many years to the Bulldogs.

And Mr. Mayor, we are happy that—we are here to try to make sure that all those thirsty athletes that we are going to have here in 1996 when the world comes to Atlanta are going to have plenty of water.

You had begun to comment on your efforts, the City of Atlanta's efforts, toward water conservation and water quality, and I know that is a concern of downstream folks, and I wonder if you would comment briefly on that if you could.

Mayor **Jackson**. I will be happy to, Mr. Congressman, and thank you for the opportunity.

We have done a lot, we have not been sitting on our hands. Just to give you a quick run-down. You know that Atlanta's population is a little bit less than half a million, it doubles within the daytime hours.

Mr. **Jones**. That is within the city limits?

Mayor **Jackson**. That is within the city limits, on the average business day, our population doubles, people coming in to go to work, to play and so forth.

The city provides water to Fayette County. You heard Chairman Maloof talking about how we are supplying it to other counties, wholesalers in that case. I actually went out personally and turned on the spigot, as they say. We are trying to act in a responsible way and frankly we have spent over $300 million so far as a city just on the question of constructing additions and improvements to our water pollution control plants to meet state and federal standards.

Again, we are the victims of changing requirements. We are spending $300 million now on correcting what we were told at one time was okay. And there is a great stress and strain on the taxpayers because of that. Those improvements were funded in part from the EPA construction grants program, but the amount of money left over to pay for the local share is still great and a severe burden. Atlanta's treatment facilities have provided secondary treatment for more than 16 years at all of its facilities and the treated discharges are in compliance with the federal NPDES permits. Water quality in the Chattahoochee River has dramatically improved during this period due to the programs implemented by Atlanta and the other metropolitan communities even though there have been large increases in the population in the area.

The South River, Congressmen, which originates in Atlanta and flows in a southeasterly direction into Jackson Lake, has been cleaned because of treatment plant improvements and combined sewer overflow regulation and treatment projects that have been constructed by Atlanta, and the South River is once again being used for fishing, for trapping and for recreation.

We are here in good faith.

I want to emphasize a point that you made just a moment ago. The issue here is not is there enough water, there is plenty of water for all of us and 15 other states combined for the next 60 years or more. The issue is one of regulation and management and I believe that has to be handled and can best be handled at the bargaining table and not in the court.

Mr. JONES. Thank you, Mr. Mayor.

I wonder if any of the panel could comment because I think this is something that our colleagues need to know, on whether or not you have already felt any impacts from lack of water.

Mr. MALOOF. Certainly during the drought periods we have seen some very dramatic cutbacks and we as a government still have a restriction on the use of water other than what you would use in the house. All of the governments in this area through drought periods put on very restrictive controls for the use of water because we were limited in what we could in fact produce by the allocation—we have not had the allocation increased. The Mayor and Fulton County—the City of Atlanta and Fulton County have built a new water plant, or in the process, and yet the fact of the matter is they do not have the allocation to operate that plant. If they do not get the allocation, that plant, which will serve a very heavy growth area, will not be able to produce and serve that area that they are spending $65–$70 million to do.

We in DeKalb County are expanding our water treatment plant and do not have the allocation to provide the additional water. So these are the things that we are concerned with.

I might add that we have heard some comment about treatment. The metropolitan region, by and large, the whole region, on its own forbade the sale of phosphorus. All of the different detergents that had phosphorus in it were outlawed in the metropolitan region on our own, to help reduce any impact on the downstream people. The State of Georgia passed a law after we did that, but the region did that after it was shown to us that it would in fact increase the quality of water.

One of the things, Mr. Jones, it has never been really stated about how much we take out. How much do we put back in and how well is it being treated. The Mayor talks about how much money he has got to spend on the water treatment, the wastewater treatment plants. DeKalb happens to be a user of his main plant, to about 50 percent of it, so those costs are going to cost us too. And we are thoroughly behind putting into place whatever it takes to make sure that the wastewater is clean and does not impact people below it. We are doing that, we are incorporating that now. But it is never stated that 70 to 75 percent of the water that we take out of the lake or the river goes back into the river. That is not stated enough. And it is being cleaned up to a much better degree than it ever has in the past.

Mr. **Jones**. It is cleaner when it leaves than when it comes in.

Mr. **Maloof**. I would not say that, but right down the stream from there it is pretty clean and in the South River, the Mayor talked about what was done to put that into shape. We built a treatment plant ourselves that is 95 percent potable when it is taken out. So the South River and Lake Jackson, which was considered dead, are now viable places where people fish and swim and do whatever they want in it. At one time it was a sludge trap, it was a terrible place, and now that has been cleaned up.

So we have done these things.

Mr. **Jones**. Mr. Secrist.

Mr. **Secrist**. Congressman, one of the points I think we need to make here and re-emphasize—we in Cobb County take half our water from Allatoona and half from the Chattahoochee, but we are constantly researching and looking for other sources of water, storage possibilities, the possibilities of drilled wells and innovative new ideas of other sources of water. And I think that the bottom line is that we are energetically and very sensitive to the need to seek other sources of water supply. At the same time, we feel it is important that people recognize that Cobb County and the others in the Atlanta regional area, planning area, have been planning for several years in this direction. We are probably one of the most astute planning regions in the whole southeast. I do not think there is any doubt about it, and we have the record to show it. We have excellent staff and we have an alertness here to this need. So we are not coming in with a strategy at the last minute. This is a long haul that we have been into and we feel that we are open to suggestions, we want to cooperate and we must cooperate with Congress and the other concerned entities. But we want you to know that we are alert to other sources of water, we are alert and practicing good strategy planning.

Mayor **Jackson**. Mr. Chairman, could I just take another two minutes to respond to Congressman Jones' earlier question?

Mr. **Nowak**. Yes.

Mayor **Jackson**. The Commissioner of our Department of Water and Pollution Control regrets that she is not able to be here today, she left town frankly before we knew about the hearing on a commitment that involves this same issue, but present here today are Rob Rivers who is Director of the Bureau of Water for the City of Atlanta—Rob, would you stand up please? And also George Vines, Director of Pollution Control, that bureau for the City of Atlanta. They are here to answer any questions the staff may have following this hearing or any other time for that matter, to augment what I have said. But we thought that you may want to know that in our city, we have just passed legislation which I signed mandating low-flow toilets for all construction beginning in 1991. That of course is also going to work along with expanding waste, conservation, displacement bags to go in toilets to reduce the amount of water required. This is done in many places and especially done in a number of European capitols, as you probably already know.

In addition, Atlanta serves all of Fulton County with water south of the Chattahoochee—I did not mention that. We have also mailed our conservation packages to every one of our customers, letting them know that—this is a part of our process of education. So we are proactive and aggressive on this issue and we assure you that will continue.

Mr. JONES. Thank you, sir.

Mr. SECRIST. Congressman, one other point, we have Dr. Phillip Carr, who is the Director of the Cobb-Marietta Water Authority, who is responsible for both the Chattahoochee intake site and the Allatoona, prepared to answer any technical questions this Subcommittee may have.

Mr. JONES. Thank you.

Mr. Stevenson, in your testimony, a paragraph towards the bottom of page two, you say "Without such comprehensive and reliable data, any actions would be premature and result in perpetual, irrevocable harm to downstream economic and environmental interests", et cetera.

Now I wonder how that can be—that statement can be justified in light of the draft report of the Army Corps of Engineers on the post-authorization changes. I would like to introduce for the record, Mr. Chairman, a letter from our Governor, Joe Frank Harris, to the Governor of Alabama in which he points out, it says "Studies by the U.S. Army Corps of Engineers as well as studies by the State of Georgia project no significant economic or environmental downstream impacts. The primary reason is that the amount of water now released weekly from Lake Lanier will remain the same. Neither Alabama nor Florida should expect any effects at all resulting from the reallocation of the small amount of the total of 1.1 million acre feet now stored at Lake Lanier."

I wonder if you could respond to that for me?

Mr. STEVENSON. The first point I believe you raised, Mr. Jones, was in regard to the comprehensive—need for the comprehensive study. We are of the opinion that the two reallocation reports, the one on Carters Lake and the one on Lake Lanier, which is still in draft form, and comments that were submitted in November, have not been responded to by the Corps of Engineers. We believe those studies did not in fact examine the downstream impacts. The studies tend to look only at the impacts of the specific federal project that they are involved with and really do not look at downstream growth needs, fish and wildlife support, navigation, power and other types of uses downstream. On both of these river systems, there are also federal projects further downstream, three—four federal projects on the Chattahoochee below Lanier and three federal projects on the Alabama system below Carters and Allatoona. The study for Allatoona has not been released yet. The proposal, the way I remember it, and would like to have the opportunity to correct if I get the number wrong, but I believe the only information that has been released thus far is an 11-page executive summary. The study supporting that executive summary has not been released, so there is very little data to really analyze that one at this point.

Mr. JONES. I might follow up on that, the figures show—and these are factual—that the amount of water which Alabama receives from the Chattahoochee is between three and four times as much as comes into Atlanta. So you've got a whole lot more water, and the facts also show that you have one-fifth as many people for that much water to serve. So I wonder what exactly the problem is, in your view, because you have got more water and less people. We are really perplexed as to why this has become——

Mr. STEVENSON. Well I would bring maybe two points forward to respond to that, and there are several more, I do not have all that data with me. But certainly the water quality south of the Atlanta metro area is degradated from that coming into the Atlanta metro area. With degradated water quality, it takes more water to in fact deal with a small amount of growth downstream.

Another example is one of the authorized project purposes for the Chattahoochee and the Coosa-Alabama system is navigation. Under the best of circumstances, the Corps of Engineers in a recent study have indicated that they cannot meet their federal commitment to support navigation 95 percent of the time, which is considered to be the norm, and that norm I believe includes lock closures for maintenance and those types of things. The most recent study indicates that under the best conditions or under the current water supply conditions that navigation can only be met 78 percent of the time.

Mr. JONES. What study is that now?

Mr. STEVENSON. That is the long-range navigation maintenance plan prepared jointly by the State of Alabama, State of Georgia, the State of Florida and the Army Corps of Engineers.

Mr. JONES. All right, sir.

The figures that I have say that under reallocation, the river levels would drop below the full depth for navigation during droughts only for an additional four days. So our studies obviously come to different conclusions, and these studies are both corps studies. We are going to have the corps with us in the next panel, so maybe we can sort some of that out.

The State of Georgia, as you know, has a very active and progressive program to manage water resources, and we wonder if you would comment on Alabama's program to manage water resources. Do you have one and at what point is it?

Mr. STEVENSON. Yes, Mr. Jones, we have a water resources program. We have some areas that we can certainly improve, I am sure that the State of Georgia and I am sure all states have areas they can improve on. We have a very good water quality program, we have a history of being involved in river basin planning efforts. We are currently completing an 18-month study period with a Water Resources Study Commission which Governor Hunt established. They are to make their recommendations to Governor Hunt in mid-October, and hopefully that will provide some new guidance in the areas of water resources for Alabama.

Mr. JONES. That is a recent thing then, because Governor Hunt is new.

Mr. STEVENSON. It is a state commission, yes.

Mr. JONES. So those are sort of embryonic efforts.

Mr. STEVENSON. Well not really, they are in their concluding stages and the Commission's activities included significant public hearings throughout the State of Alabama and had a committee structure with representatives of various groups, public and private groups, federal, state and local government, as well as private citizens and the committee structure itself had over 270 different people involved in that process. So we are in the final stages of that and the report is currently being prepared for presentation to the Governor.

Mr. JONES. I understand. What I meant is in terms of the big picture, this is a recent study. Have you determined how much water you need?

Mr. STEVENSON. At what point in time, sir?

Mr. JONES. At any point in time.

Mr. STEVENSON. On a statewide basis we have not determined that.

Mr. JONES. Well I have one more general question and that is to whoever wants to jump in about how you feel about these negotiations between the three states.

Mayor JACKSON. Mr. Chairman, let me start by responding to the earlier statement by the gentleman from Alabama about the water quality coming into Atlanta and then coming out of Atlanta. I am informed by Mr. George Vines of the City of Atlanta Bureau of Pollution Control that the amount or pounds of waste that can be discharged from the Atlanta—that is the City of Atlanta and the metro area of Atlanta—into the Chattahoochee is a fixed amount. Therefore, regardless of additional growth and increase in treated wastewater discharge, the amount of pollutants discharged will not increase—federal law, state law. In other words, as flows increase, we will remove more pollutants before discharging. So that concern, therefore, is not valid.

Now what do I think about where we are. Mr. Chairman, I have wondered about why the State of Alabama felt compelled to pursue this and I do not know. One would have to assume that they believe their position and I certainly do not know anything to rebut that, but I will comment that I notice that about the time this thing was heating up, a new billboard went up in downtown Atlanta on the expressway, the biggest billboard on the downtown expressway connector, says "Alabama is open for business". I would never want to accuse another state of trying to capitalize on publicity which might imply that our state cannot accommodate industry and their state can—I would never want to imply that. [Laughter.]

But that billboard is right downtown.

I think we can settle this thing amicably and I certainly hope we shall.

Mr. **Jones**. If I might interject, Mr. Mayor, the first time I saw that billboard, I thought that was good for Atlanta's billboard business. [Laughter.]

Mr. **Maloof**. I think that the main problem if we do not resolve this issue in a very short period of time—which we should do, I do not think the issues are that much apart—if we get caught in this 2040 study, which is projected for four years but some think it would take eight years or somewhere in that neighborhood, and in the meantime the promise that was made to us on the 2010 reallocation is denied to us, then you are talking about four to six years minimum—you are talking about 1996 and we still are not able to do what we need to be doing to prepare for whatever we are going to need to prepare for, not only now for the Olympics—this is before we knew we would get the Olympics—but for 2010. So the ability to do the planning and put the infrastructure in place, such as in Fulton County building that water plant, will be negated. And I am more concerned about the ability to build.

You know, the one thing I have learned about water in the time I have been in government is that it is a long-term process. It takes forever to agree to do something and then to design it and then to build it. And if we do not get about our business now, there is no way we are going to have in place what we need by 2010 and without the reallocation, we cannot do it.

I am not opposed to the 2040 study, but I would like to get our allocation for 2010 if you do not mind, please, so we can start working to do what we have been doing. We have had a history in this area of planning ahead and putting in the infrastructure and making sure that we can in fact deal with growth. And if this is restricted to us and we cannot get this water, there is going to be real turmoil here. And I do not think Alabama is going to benefit from us not doing that. I think Alabama is as dependent upon Georgia doing whatever it does as maybe we are that they do. We are all inter-dependent, we cannot live by ourselves. Atlanta is the engine for the southeast. Do not let that engine slow down, gentlemen.

Mr. **Secrist**. Let me just say, Congressmen, it seems to me what I am hearing and what I have heard in the last weeks is that one of the issues is a credibility problem here in terms of the Corps of Engineers model being used as a basis here in our water strategy planning. If this is in fact a concern that has validity, then I would think that the next step would certainly be to develop or implement, if you will, a more sophisticated model and see how things check out. My concern is that that is not really the issue at all, that it is a ploy here and it has something to do with 1990 politics. I will just call it like it is.

And I would like to take this technical issue of whether or not the Corps' model is accurate and deal with that, and I think that is the heart of it.

Mr. **Jones**. I appreciate that.

One last question, Mr. Stevenson, and I will wrap it up.

In 1986, the Congress approved the reregulation dam, which would have probably taken more water out and had more of a downstream impact, yet the State of Alabama did not object. Now reallocation, which is more positive for everybody, yet now Alabama objects—why was there not any voice raised through the whole process, of authorizing the re-reg dam, which was very open and a long process, from Alabama.

Mr. **STEVENSON**. Mr. Jones, it may very well have been open within Georgia, we have——

Mr. **JONES**. I mean within the Federal Government.

Mr. **STEVENSON**. We have searched our records and we find that there was never a study on the re-reg dam made available to the State of Alabama to review prior to it being authorized by Congress.

Mr. **JONES**. There is very extensive Congressional testimony on the re-reg dam. Of course it was available.

I would like to thank you all. It looks like the Mayor had to leave and Commissioner Secrest and everybody. We have taken a lot of your time and we thank you. We thank you for coming all the way over from Alabama. And Mr. Maloof, we appreciate you letting us use this auditorium. Mr. Roy, I would like to compliment my County Commissioner, Mr. Roy Varner's vision in water projects and infrastructure projects and I would like to thank the whole panel.

I appreciate it, Mr. Chairman.

Mr. **MALOOF**. Thank you for being here.

Mr. **NOWAK**. Thank you very much. One other item I think would be useful, if you could—Mr. Cox, the Judge's suggestion for a negotiated settlement. Did that emanate from the corps or did that emanate from the parties after realizing what a court proceeding might involve, as you entered your pleadings?

Mr. **COX**. The impetus—part of the impetus for the stay was the Corps—and Colonel Thuss and his attorney can speak to this more directly—but his desire to be able to participate with the states in a negotiating process. He felt constrained by the pending litigation and believed that if it was stayed to permit negotiations, that he could participate fully, and be a full member and facilitate the negotiations. Since the stay has been entered, he has taken a more active role and we have seen some more progress.

Mr. **MALOOF**. Mr. Chairman, as I stated before, the negotiated settlement on the stay was not agreed to by all concerned parties, and while there were certain concessions made, we did not feel like it impacted the metropolitan region and it is a real concern. While it gave some relieve in certain areas, it certainly did not in any way deal with the Chattahoochee to any degree, or Lake Lanier, so there was disagreement.

Mr. **NOWAK**. I understand that as this process moves forward you will have the opportunity to participate, I assume all parties that were stayed, including the intervening parties, will be part of the total negotiation, is that correct?

Mr. **COX**. We are trying to do it among the states at this time with Governors' representatives from Florida, Georgia and Alabama and the Corps of Engineers. Individual municipalities and the Atlanta Regional Commission have not participated directly, but I understand that they have had internal meetings within

Georgia to discuss their views and objections and recommendations.

Mr. MALOOF. You can bet whatever you have got that we have let it be known to the State of Georgia and to whomever what our concerns are and making sure that they are totally understood by the people that represent us. Now whether or not we become a party to the suit is a question that needs to be determined. You do not bite the hand that feeds you, I guess, and we are not thinking about suing the corps, but if the bottom line comes down to that, we will have to do that to protect the metropolitan region's interests, sir, and that is one of the things we are concerned about. No one on our board wishes to sue or be a part in suing the Corps of Engineers. Alabama sued the Corps of Engineers, we do not want to do that, but to make sure that our case is told, we are going to have to it appears if they continue to hold to that line that they are taking.

Mr. NOWAK. Well you will have, of course, opportunity for a negotiated settlement or else you will have to go through the court proceedings, as you well know. Somewhere down the line if a significant change is finalized and brought to the Congress, of course our Committee will be sitting there to review all the technical details that come forth from not only the court proceedings, any negotiation, any study that has been made over the intervening months or years, as the case may be. We look forward to working with all of you in pursuing what we could offer as perhaps some help in the negotiated settlement. If that is not possible, of course, as these things start to evolve, you will have different interests coming before the Congress, including every Congressman that represents the north, south, east and west of you. And I am sure you realize that.

I want to thank you for your time and testimony. And Mayor, good luck in 1996 and certainly before that.

We will recess for five minutes while we have a new panel come up, the Army Corps of Engineers and the Fish and Wildlife Service. If those representatives will come up and be prepared to testify in just five minutes. Thank you.

[Recess.]

Mr. NOWAK. Our next witnesses are here and if everyone would like to take their seats, we will proceed with the rest of the testimony and witnesses, so we can move through the program and everybody will have at least some opportunity for their statements and a brief oral explanation of those statements.

Let me turn to our first panel, the Army Corps of Engineers, Colonel Michael F. Thuss who is the District Engineer of the Mobile District. And joining him from the Fish and Wildlife Service, James M. Barkuloo, Project Leader from the Panama City Field Office. Welcome, gentlemen, and I will turn it over to the Colonel.

TESTIMONY OF COL. MICHAEL F. THUSS, DISTRICT ENGINEER, MOBILE DISTRICT, ARMY CORPS OF ENGINEERS, AND JAMES M. BARKULOO, PROJECT LEADER, PANAMA CITY FIELD OFFICE, FISH AND WILDLIFE SERVICE

Colonel **Thuss**. Good morning, Mr. Chairman. I have also with me Mr. Skeeter McClure, who is my Chief of Planning, and I would request that you incorporate my full written comments for the record.

Mr. **Nowak**. Without objection, so ordered.

Colonel **Thuss**. And with your permission, I will summarize my statement.

Mr. **Nowak**. Very well.

Colonel **Thuss**. Sir, I would like to bring you up to date and tell you where we are very briefly with the water negotiations. Essentially the Corps of Engineers has sat down with the states of Alabama, Georgia and Florida and begun negotiations on coming to a memorandum of agreement between the three states on how to proceed from the litigation that was proposed by Alabama and is now in a stay, through the completion of a comprehensive study to address water resources conflict resolution, specifically in the two basins that we are interested in here.

Currently we are very close to reaching an agreement. The general principle of the agreement would be to address the water needs from Lake Carter and Lake Allatoona and Lake Lanier during a quick period, during an early period, within 30 to 60 days, perhaps extending to 120 days. Alabama and I have an agreement that at any time, given 60 days notice, we can proceed back to court. I would anticipate that if we do not reach an agreement, some type of agreement between the three states in that period of time, that we would probably end up going back to court. Either party can do that with a 60-day notice. We are very optimistic, however, that we will not have to do that, that we will in fact reach an agreement and be able to proceed, given the time lines that I have just outlined.

Having said that, sir, I will be happy to answer any questions that you might have.

Mr. **Nowak**. Thank you very much, Colonel. We appreciate the comprehensive nature of your statement. We have had the opportunity to review it prior to the hearing and it certainly puts the total package in perspective and we appreciate your time and the time of your staff and your planning agency to forward us that statement.

Mr. Barkuloo, would you also like to make a statement?

[The prepared statement of Colonel Thus appears on p. 167.]

Mr. **Barkuloo**. Mr. Chairman, my name is James Barkuloo, Project Leader of the Panama City Field Office of the Fish and Wildlife Service. I also would like to have the written testimony submitted for the record.

Mr. **Nowak**. Without objection, so ordered.

Mr. **Barkuloo**. The Service is primarily concerned with cumulative impacts and we would therefore have recommendations in this statement related to those impacts, and that is primarily our concerns for this reallocation.

Mr. Chairman, thank you for the opportunity of being here and I will be happy to answer any questions that I can.

[The prepared statement of Mr. Barkuloo appears on p. 71.]

Mr. NOWAK. Thank you for your statement also and let me just ask a couple of questions. Will you be part of this negotiation? You will have the input into—from the technical side of the Fish and Wildlife——

Mr. BARKULOO. Yes, sir.

Mr. NOWAK [continuing]. To both—I should say all three; the State of Florida, State of Georgia, State of Alabama?

Mr. BARKULOO. Where it involves the Fish and Wildlife coordination, yes, sir, we will.

Mr. NOWAK. Fine. Let me turn to Arlan Stangeland, our minority leader.

Mr. STANGELAND. Well thank you, Mr. Chairman. Thank you, gentlemen. I too have reviewed your report and find it very comprehensive.

I guess, Colonel Thuss, you are familiar with all of these negotiations on water quality disputes, having served as I understand out in the arid southwest, and so I would expect you are imminently qualified to come in here and negotiate this job since it is not near as arid.

But to Mr. Barkuloo, can you give us any indication of the impact that you believe will be had on fish and wildlife resources? You say that the Corps report is not as comprehensive or complete as it ought to be. Where will those impacts take place primarily and how severe could they possibly be?

Mr. BARKULOO. Our major concerns have been water quality and we feel that in reading the documents that were given to us that these were not completely addressed or addressed to the point that we could determine those impacts. Also where it would——

Mr. NOWAK. Would the gentleman yield on that point?

Mr. STANGELAND. Sure.

Mr. NOWAK. Do you have an estimate of what further study would be necessary and a time frame for that type of study if that were part of the negotiated package?

Mr. BARKULOO. No, sir, we do not. We would have to get with the Corps and make those determinations based on what they have available in addition to what we have seen.

Mr. NOWAK. But it could be part and parcel of any settlement, that further study, is that correct?

Mr. BARKULOO. That is entirely possible, yes.

Mr. NOWAK. Thank you.

Mr. STANGELAND. When you speak of water quality, are you taking into account the efforts of the City of Atlanta to improve their water quality discharge above what it is today?

Mr. BARKULOO. Yes, sir. We are not speaking in specifics in this particular case, we are primarily concerned with some of the water quality problems that have already been experienced, say in West Point Reservoir and downstream, and also we are concerned with the impacts at the low flows, primarily. Most of the problems are not experienced during normal flows, but when you get to low flows then you have problems with especially water supply in the lower river.

Mr. **Stangeland**. Just two questions for both of you. Previous witnesses discussed the need, the potential need in the future for additional reservoirs, but recognizing the difficulty of putting those reservoirs in what are now wetlands and the unwillingness of some to allow wetlands to be utilized for most any purpose, is there a problem here as to what has to be done to resolve the problem if additional reservoirs might be needed? The second question is how familiar are you with the research and exploration of the possibility of deep water wells through the crystalline bedrock that is found in this area and that potential for water supply in the future?

Colonel **Thuss**. Concerning the wetlands, sir, each permit—request for a permit of course would be looked at on an individual basis and go through the public announcement process. So it would be really premature for me to speculate on that, plus I do not know what the outcome would be—I think we need a comprehensive study to look at what reservoirs might—that is one alternative. I am not sure that it would be the selected alternative, I do not know at this point.

Mr. **Stangeland**. I guess the reason for that question is I think your downstream concerns for draw off will not become critical until after the year 2010, given the probable growth rate We need to explore the possible alternative sources. So I do not know that it is something that has to be done today, but it is something that certainly ought to be looked at because you have to project beyond 2010. This could be a tremendously fast-growing area, probably is now. I am not that familiar with the growth in this area, but there could be rapidly increasing demands on water and the question remains, what are the alternatives in the future as opposed to just up to 2010.

Mr. Barkuloo, could you respond to those as well?

Mr. **Barkuloo**. One of the problems—you mentioned the ground water withdrawal, one of the problems we are having in the lower river is that quite a contribution is made to the lower river from ground water sources and as major withdrawals are made from ground water, we do not know what impact that is going to have on the lower river either. But it has already had some effect because some of the springs coming into the river are either reduced or stopped at this point. So that of course is a major concern, that we do not address those as part of the impact of the withdrawal in the upstream area.

Mr. **Stangeland**. Thank you. Thank you, Mr. Chairman.

Mr. **Nowak**. Thank you very much. We will turn to Congressman Ben Jones for any questions he may have.

Mr. **Jones**. Thank you, Mr. Chairman, and thank you, Colonel and Mr. Barkuloo, it is good to see you again, Colonel. I have sort of been trying to pursue this thing about reallocation and reregulation and it is my understanding that—I would like to know if reallocation would have any impact on the downstream water users that is any different from the impact of the previously proposed reregulation dam which has already been approved by Congress. And I think that the Corps' position, the recommendation for reallocation, was primarily based on economics. I wonder if there is any difference there, because we have already been through this process.

Colonel THUSS. No, I do not think there is any difference, but again, that is part of the—our position is that there would not be any difference, but that is of course not Alabama's position and the suit's position.

Mr. JONES. I understand that, yes, sir. Their position is that there is a difference between the impact of reregulation and what would have been the impact of—or rather between the impact of reallocation and what would have been the impact of reregulation?

Colonel THUSS. Well, to one extent, and that is in our authority. They questioned our authority to enter into water contracts based on the storage requirement.

Mr. JONES. I see.

Colonel THUSS. That is part of the suit, so that is the difference that I am referring to.

Mr. JONES. Mr. Barkuloo, has the Fish and Wildlife Service ever approved or concurred in the Corps' reallocation proposal?

Mr. BARKULOO. We have come to agreement with them over the reallocation, yes, sir.

Mr. JONES. So everybody is on board there.

Colonel, in testimony earlier this year before the Subcommittee, I asked General Kelley about whether or not a decision had been made on an EIS or environmental impact study, and I wonder if this has been done, and if not, when that will be done?

Colonel THUSS. Will you clarify for me please——

Mr. JONES. Whether or not a decision has been made on whether or not to pursue an environmental impact study.

Colonel THUSS. For the reallocation?

Mr. JONES. Yes, sir.

Colonel THUSS. And the Post Authorization Change?

Mr. JONES. Yes.

Colonel THUSS. No, sir, the decision has been made, as far as we are concerned at this point, that we believe that what we have done is sufficient and we stand on that. However, again, that is part of the litigation, that Alabama questions whether that is sufficient or not. That is the second part of the litigation that they challenged us on.

Mr. JONES. Mr. Barkuloo, I am wondering in your opinion, or what your research shows, as to whether or not the water quality in the Apalachicola Bay has improved over the last ten years or so.

Mr. BARKULOO. I do not have any information on that, but I suspect that it has gone down hill a little bit because of the low water that we have experienced in the last few years.

Mr. JONES. I am sorry?

Mr. BARKULOO. I think it has gone down hill some due to the low water that we have experienced in the last few years.

Mr. JONES. Because of the droughts?

Mr. BARKULOO. Because of the drought conditions that we have had.

Mr. JONES. Yes, sir. The Corps states in its draft Post Authorization Change Report on reallocation that the impacts downstream are insignificant. I wonder if this is so, what is the purpose of the comprehensive study, and if you wish to venture an opinion, on whether the comprehensive study should affect the reallocation?

Colonel THUSS. If we reach agreement with the three states to conduct the comprehensive study, given the process that we would conduct it under, we would want them to agree to that, I am relatively certain that they would ask that any alternative that comes out of that, the environmental impacts of that would need to be looked at. How that specifically then would relate to the Post Authorization Change is still an item of negotiation at this point and I really would not want to speculate. I told you previously what our position is at this point on it and we stand, and we do not have an agreement with the three states yet as to how we are going to proceed, and so I think I would just leave it at that.

Mr. JONES. All right, sir. Thank you, Mr. Chairman.

Mr. NOWAK. Thank you very much.

Mr. STANGELAND. Mr. Chairman, may I ask one more question?

Mr. NOWAK. Mr. Stangeland.

Mr. STANGELAND. We were hit severely by drought up in my area in 1988 and I expect you probably were down here too, but was there a severe drought here in 1987 or was it 1986?

Colonel THUSS. 1986, sir.

Mr. STANGELAND. What has the level of water in the reservoirs been since 1986, as compared to prior to 1986? Has there been any vast reduction in the water levels of the pools since 1986?

Colonel THUSS. No, sir.

Mr. STANGELAND. Okay. So those droughts really have not affected the volume of water available?

Colonel THUSS. They affected it during the drought, but since that time, we have had sufficient rains to bring the reservoirs back up.

Mr. STANGELAND. Thank you.

Mr. NOWAK. Mr. Jones.

Mr. JONES. Mr. Chairman, I would like to submit for the record a letter from General Kelley to Senator Nunn, which says that the reallocation will proceed independent of the comprehensive study.

Mr. NOWAK. Without objection, so ordered.

Gentlemen, thank you very much. We will, on this matter, in some other areas of the country, have extensive records being built up and we are going to keep this record open as we go back to start to review it and follow your progress in your negotiation. We may be in further contact with each of your agencies for additional information to perhaps fill in some of the gaps as we review all of the testimony that we receive here in a comprehensive manner.

Thank you today for taking the time and for your especially well-prepared statements.

We will now turn to our third panel from the Atlanta Chamber of Commerce, Mr. Simpson, who is Chairman of the Water Supply Task Force. If he would come forward along with J. David Chesnut, who is Chairman of the DeKalb Chamber of Commerce. And we also have on this panel Joy Bauer, who is from North Fulton Chamber of Commerce and from the Sandy Springs Chamber of Commerce, Linda Gillman. Ladies and gentlemen, if you will come forward, take your seats and say hello to each other. Let me start off with the beginning of my list, Dr. Simpson.

[The letter from General Kelly appears on p. 223.]

TESTIMONY OF GEORGE L. SIMPSON, JR., CHAIRMAN, WATER SUPPLY TASK FORCE, ATLANTA CHAMBER OF COMMERCE; J. DAVID CHESNUT, CHAIRMAN OF THE BOARD, DEKALB CHAMBER OF COMMERCE; JOY H. BAUER, EXECUTIVE DIRECTOR, NORTH FULTON CHAMBER OF COMMERCE; AND LINDA V. GILLMAN, EXECUTIVE DIRECTOR, SANDY SPRINGS CHAMBER OF COMMERCE

Mr. SIMPSON. Thank you, Mr. Chairman, members of the Subcommittee.

As you might expect, the Atlanta Chamber of Commerce is vitally interested in this problem of water for the near future and the long future, not only in Atlanta but in the whole general area of which Atlanta is the commercial and financial center.

I will not take the Committee's time to reiterate the tremendous loss in jobs and money not only again in Atlanta, but in the larger Atlanta area and for that matter throughout the southeast, that would be a consequence of there being a hiatus in the supply of water available for growth, as as you know, we are certainly on the verge of that enough unless we can find a way around that, for it to be of immediate concern, and this concern is shared by all members of the Atlanta Chamber and the interests which they represent.

I would like to emphasize that the Atlanta Chamber tends to its business of growth, of doing for Atlanta, but it has not historically and does not now have tunnel vision on this matter. It is understood that what is good not only for Five Points, but for the wider area and for the whole south, and particularly our neighbors up and down the river, is also in the long run, good for Atlanta. And the Chamber is participating in the process from that base and not one of simple selfish interests.

We hope that the Colonel is right when he said it looks like we may be able to get into a negotiating mode. We will be very happy when that is in a condition that we can feel secure about it and go forward.

The Atlanta Chamber does look to reallocation as a generally reasonable and fair way to meet the immediate problems of interim contracts and as well to carry the city and area to 2010. The Atlanta Chamber also places great emphasis on the reservoir matter simply because as of today that is the apparent best alternate or best road to go for the long-term future.

We would encourage these negotiations, we would hope that they can be speedy. We would like very much for the Congress, as you are doing, to bring to bear all of the feelings that this is a problem that has national interest as well as local, that technicalities unless they represent some very important substance underneath ought not to interfere with the growth of this area and of the south in general, which has been so long coming and if you have been watching television this week it came from a pretty low level economically.

So without taking more of the Committee's time to repeat the very strong and accurate statements made by Chairman Maloof and the Mayor and others on the figures and the size of the impact here in financial terms and job terms, I will simply close with that statement.

Mr. NOWAK. Thank you very much, Dr. Simpson. Let us turn to the other panelists, David Chesnut.

[The prepared statement of Dr. Simpson appears on p. 156.]

Mr. CHESNUT. Mr. Chairman, members of the Committee, I want to thank you for coming today, and we herewith submit our written testimony and we will try to be brief.

The previous panelists have adequately described the statistics and the problem. Suffice it to say that this is, without doubt, the most critical economic development issue which we face in this region. The region's position has been ably stated by our Congressman, Mr. Ben Jones, who has worked diligently on this problem.

We would like to point out to you that it is our position, as Maynard Jackson has previously stated, that supply is not the problem—management is. Reallocation is necessary and we believe that that can occur through reasonable people resolving their own problems. Unfortunately this problem does not have a Gramm-Rudman deadline which causes a crisis, thereby causing consensus and agreement. I wish that it did.

However, we do believe, as has been stated by the previous Mr. Secrest, Mr. Maloof, Mr. Jackson, that this problem can be resolved by men of reason sitting down together. It is going to require conservation by all. No one will get what they think is totally in their best interest. Perhaps the wisest thing Congress could do would be to require that the withdrawal of waters be downstream from the point at which the treated water is put back in. That way, we would be assured, by 2010, that the water that was put back in would be purer than that which was taken out. That is said in the manner of jest, but it is one of the problems which we must address, and that is almost the simplest way of addressing it.

We must promote conservation and promote management. It is a problem that has a reasonable solution, provided we conserve, improve the quality of the waters released, and plan for the long term solution which in this area has got to include reservoirs and some reasonable understanding of how we will handle the wetlands issues.

We would conclude by asking that the most effective thing this Committee could probably do would be to provide a forum and push for a crisis state whereby these people would have to come to terms or agreement. It can be accomplished, it requires everybody coming to the table and everybody being willing to take the bite.

Thank you very much for being here.

Mr. NOWAK. Thank you. Let me now turn to Joy Bauer from the North Fulton County Chamber of Commerce.

[The prepared statement of Mr. Chesnut appears on p. 80.]

Ms. BAUER. Thank you, Mr. Chairman, Congressman Jones, distinguished panel. I want to comment——

Mr. NOWAK. Would you move the microphone closer please?

Ms. BAUER. Certainly.

I want to commend Congressman Jones, first of all, for the continued leadership you provide and for being here and the astute questions you have asked today.

I am here representing North Fulton County, which is the northernmost part of the Fourth District. However, this is not just a North Fulton issue, this is an issue impacting the Fourth District, metro Atlanta, the State of Georgia and the surrounding states. This issue and the future of this area rests on the availability of water, short-term, mid-term and long-term. Water in Georgia is no longer just an economic development issue or a growth issue—it is our future.

We must recognize that water is a limited resource and there are competing interests. People in this area have concern on the water level at Lake Lanier impacting their lake front properties, but our water needs come down to the availability of drinking water and the economic welfare of the region, not an aesthetic issue.

The planning process is now getting up to speed. We cannot change our past sins in this area, but we are here today and can ensure our future with good comprehensive planning and partnership. This planning process needs to address density: (A) Can we get water? (B) Can we dispose of sewerage?

High density areas need to be serviceable and not density planned in areas that cannot be serviced.

Regionalism is an important tool for our future. The Governor's Growth Strategies' results clearly point out what we must do to go forward. Our statewide water needs are inter-related and regional. We must prioritize the needs of the many rather than needs of only a few. Lake Lanier can only service our needs until 2010 and the proposed regional reservoirs are currently tied up in the federal wetlands issue. Wetlands are no longer just the developer's concern but must be looked at for the impact on the common good of the people of this region.

The tools for solving our problems are at hand. Decisions cannot be made in a vacuum for political needs versus real needs of this community. There is not one solution, but many, to our problem. The rereg dam and/or reallocation of Lake Lanier—as we know, the rereg dam has been approved by Congress—also provides a net gain of wetlands. The reservoirs that are currently laid out by the Governor's Growth Strategies Commission are critical and the wetland issue must be mitigated and dealt with.

We must also reinforce conservation measures and education of those measures. Water is our future, our lifeblood and working together through public/private partnerships and all of the governments coming together in cooperation, your leadership, we can assure the future of this region.

Thank you.

Mr. NOWAK. Thank you very much. We will now turn to Linda Gillman from Sandy Springs Chamber of Commerce.

[The prepared statement of Ms. Bauer appears on p. 78.]

Ms. GILLMAN. Thank you, Honorable Committee Chairman, members of the Subcommittee. We appreciate this opportunity to come before you this morning.

Sandy Springs is a rapidly growing community with a current population of just over 73,000. We also have 11,000 business firms in our community.

We are an upscale community with schools and churches and shopping malls and residential areas and commercial areas. We are located between the City of Atlanta and the City of Roswell.

We have the unique distinction of being located at the very heart of the growth pattern of metropolitan Atlanta. We currently have over 18 million square feet of commercial Class A and B office space, with 69 million permits pending—69 million. That would make us larger than the City of Atlanta. Our daytime population now is well over 100,000, so you can see our concern is very sincere.

We were told by the ARC that the Atlanta SMSA population projection is 4.5 million by the year 2010. The limitation or loss of economic prosperity to the Atlanta region due to lack of water would be devastating.

According to the ARC, the eight-county Atlanta regional forecast for jobs was 1,349,000 just for 1989. The ARC translates these jobs into an average household income of $38,729. Sandy Springs, however, is uniquely prosperous and our average household income is over $71,000.

The ARC has projected the creation of over 525,000 new jobs in the eight-county region during the 1990s. I would like you to suppose for a moment that the lack of water caused a loss of just 20 percent of the income from these jobs. There would be over a nine million dollar annual loss in salaries. The buying power attributable to these salaries would have such a staggering economic impact on the Atlanta region and the entire southeast, that the Chamber has been unable to find a single expert who would even attempt to extract the loss figures for the region.

We understand that the reallocation of Lake Lanier has repercussions both upstream and downstream, and it will require your authorization. However, the ARC has stated to us that they consider this to be a significant part of the permanent solution to the Atlanta region's water supply. We rely on their detailed research and good judgment and we wish to defer to their testimony in this regard.

Again, thank you. We appreciate the opportunity to come before you this morning.

[The prepared statement of Ms. Gillman appears on p. 82.]

Mr. NOWAK. Thank you all for your testimony. You mentioned 69 million square feet of office space. You will not even have the water for the cement to build those buildings.

Ms. GILLMAN. That is right.

Mr. NOWAK. Let me just thank you for your attendance. I will turn to Arlan for any questions he may have.

Mr. STANGELAND. Thank you, Mr. Chairman.

Mr. Chesnut, your proposal to withdraw downstream of the discharge might be characterized as the carrot and the club, but it is not a bad idea. It might waken our own individual communities to the fact that we cannot be doing something to a downstream community that we are not willing to do to ourselves, and it makes some good sense.

I want to thank you all for your testimony.

Ms. Bauer, there is one point I would like to make. I raised the question with the Fish and Wildlife Service when one of the previous witnesses had said that the need may arise to build reservoirs in wetlands. We have a no net loss policy on wetlands today in this country elicited or spoken by the President and I think affirmed without a doubt by the Congress, and it is something we have to look to.

However, population encroachment on the environment in general is going to happen. But before we start casting—and I say this in no way to be critical, please—before we start encroaching on the environment, we may have to change our lifestyles.

For example, in 1988 and 1989 there were extreme drought conditions up in my area and Minneapolis was drawing the bulk of its water from the Mississippi River. Dangerous low flows existed for the handling of their wastewater treatment plant, the handling of their electrical needs, the handling of their water supply, and yet Minneapolis was still pumping from deep wells for air conditioning. It was a stupid use of a great resource and it has been banned.

We are going to have to find ways on our own, and I speak for all of us, to really conserve to the nth degree, to reuse to the nth degree, because we are going to have tremendous resistance. And I am sure the environmental community is coming on behind this panel and will say this—resistance from encroachment on that environment. Wetlands are a prime resource, they are valuable for a multitude of reasons, but when you have a conflict with the public and the wetlands and the public needs a facility such as a water reservoir, we are going to have to settle that.

Ms. **Bauer**. I agree.

Mr. **Stangeland**. But you made a good point—you all have, and I appreciate you being here and your testimony. Thank you.

Mr. **Nowak**. Thank you very much. Let me now turn to Congressman Jones for any questions or comments he may have.

Mr. **Jones**. Thank you, Mr. Chairman. And I would like to thank the panel very much.

The Chairman raised an eyebrow when he heard the average household income of Sandy Springs. I represent the Fourth District, which is the most diverse congressional district in the southeast. Sandy Springs is not untypical of the kind of prosperity that we have in the Fourth District and the kind of—I guess it is kind of a boomtown mentality. We are becoming a great international city and we do not take second place to anybody. Really the only thing that can stop—this is a very positive growth—is this water problem.

I wonder—I have a couple of questions—as business people, as Chamber members, if the Chambers are working with Chambers in other States, Alabama for instance, or the Business Council of Georgia is working with its partners in Alabama and Florida, to build some bridges and exchange information on this problem. If anybody knows of that——

Ms. **Bauer**. If I can answer that, Congressman Jones.

Mr. **Jones**. Yes.

Ms. **Bauer**. There is no official channel of communication with regard to that at this time. However, the Governor has put together a committee and there is communication with that committee and part of that committee is made up of different elected officials and different representatives from the Governor's Growth Strategies Commission. But it is not going through, currently, the Chambers and the Business Council.

Mr. JONES. I would only suggest—it is not my business to get into—that that would be an awfully good idea, because I think that everybody's business interests are at stake. And as you pointed out, Linda, the impact, the negative impact, that this would have on the whole region, this loss of buying power, this loss of growth, is so staggering that it cannot even be calculated. I thank you for that and I thank you for your time. I really appreciate it and look forward to continuing to work with you on this issue and I thank you, Dr. Simpson, David, all of you, very much for participating today.

Mr. NOWAK. Thank you very much, Congressman.

We will have, again for all the panels, the opportunity hopefully to ask you more questions and fill in this record as we go along, especially as we talk about the economic statistics of North Fulton and Sandy Springs and the other areas that you are representing.

We will now call our fourth panel. From the National Wildlife Federation, Rudy Rosen from the Southeast Office, from the Georgia Conservancy, Bob Kerr, and from the Sierra Club, Michael Wardrip, who is the Georgia Chapter President I believe.

Mr. Rosen, we will turn to you for your testimony at this time.

TESTIMONY OF RUDOLPH A. ROSEN, DIRECTOR, NATIONAL WILDLIFE FEDERATION, SOUTHEASTERN NATURAL RESOURCES CENTER; JAMES WILSON, GEORGIA CONSERVANCY; HANS NEUHAUSER, THE GEORGIA CONSERVANCY; ROBERT KERR, FORMER EXECUTIVE DIRECTOR, THE GEORGIA CONSERVANCY; AND MICHAEL WARDRIP, WATER ISSUES CHAIR, GEORGIA CHAPTER, SIERRA CLUB

Mr. ROSEN. Mr. Chairman, my name is Rudolph Rosen, I am Director of the National Wildlife Federation's Southeastern Office in Atlanta. We are a regional office of the Federation.

The National Wildlife Federation is the nation's largest conservation education organization with over 5.8 million members and affiliated organizations in each state and in two U.S. territories. Our affiliates in the affected states are the Georgia, Alabama and Florida Wildlife Federations. Accompanying me today is Mr. James Wilson of the Georgia Wildlife Federation.

Sir, I am going to abbreviate my comments and I would appreciate it if they could be inserted in the record in their entirety.

Mr. NOWAK. Without objection, so ordered.

Mr. ROSEN. Thank you.

I am going to focus these comments today on strategies for accommodating Atlanta's long-term water needs without further compromising the integrity of surrounding waters or imposing hardships on other users of Atlanta's watersheds.

Citizens in the Atlanta metro area and downstream are faced with a difficult problem, sir. The growth of Atlanta has created a big city on several small to medium-sized watersheds. Without conservation or without water resource development, the Chattahoochee River and other metro waterways just do not have sufficient flow to supply municipal and industrial water needs and to provide the flushing and the dilution capacity to readily handle the wastes of Atlanta's two million plus people and all the supporting industries.

Now addressing Atlanta's long-term water needs requires addressing water quantity and water quality issues. But for Atlanta, because of its size and limited watersheds, steps above and beyond those necessary in many other big cities that you are familiar with may be needed to supply water and protect the water quality. Atlanta just needs to do more than many of the cities throughout the country.

We support seeking an alternative to the formerly proposed reregulation dam. However, at this time, we are not willing to fully embrace the currently proposed reallocation plan because the current proposal leaves too many unanswered questions about important issues, issues such as the impacts on water quality, water conservation programs, secondary impacts as a result of increased population growth and the cumulative environmental impacts that the U.S. Fish and Wildlife Service discussed in areas downstream of Atlanta all the way to the Gulf of Mexico.

We recommend a comprehensive, basin-wide approach, to water resources planning to address Atlanta's water needs, and indeed the needs of the entire region.

Already the lack of such an approach is resulting in confusion, in efficiency and potentially wasteful and unnecessary expenses. Note the lawsuit. A comprehensive, basin-wide approach is needed.

Our comments illustrate the components and rationale for the comprehensive basin-wide approach we recommend.

Now I am going to read you some of the long-term recommendations while Mr. Wilson here will concentrate on some of the short-term actions that we are recommending.

First of all, we suggest creating and implementing an effective basin-wide—not just metro Atlanta-wide, but basin-wide—conservation program where all users of water within the entire river basin comply with a comprehensive conservation plan.

Second, require zero degradation from the current water quality standards with a goal of attaining swimmable-fishable designated use throughout the Chattahoochee-Flint-Apalachicola Rivers Basin by 1998, including the elimination of combined sewer overflows. I believe it was Mayor Jackson who said that total pollutant loading would not change with increased growth. Now that may be possible, to keep pollution discharge constant at treatment facilities, but much of the pollution in our rivers today comes from the untreated run-off from lawns, roads, parking lots and so on. As we grow, as more lawns are built where forests once were and as shopping center parking lots are built where fields once were, this run-off, this polluted run-off, is going to increase.

Next, we recommend establishing minimum flow for maintenance of water quality standards for the Chattahoochee River. We recommend de-authorizing the reregulation dam.

And perhaps most important and of the longest term benefit, we recommend creating an interstate compact between Alabama, Florida and Georgia to promote and coordinate regional basin-wide water resources planning. This has been done in other water basins and it has been done effectively.

In addition to that, we recommend creating and funding a regional water resources planning commission. Now the interstate compact would be administered by this Commission, they would have planning authority for basin-wide water resource use and development. The commission would include representatives from the three states—this would be a state commission, not a federal commission, but a state commission, and it would include citizen representation. The commission would initially focus on the Chattahoochee-Flint-Apalachicola Rivers basin, but adjust jurisdiction to additional shared waters based on need. The commission would be responsible for coordinating all water use and water quality activities, monitoring and enforcement in shared water basins.

And last, we suggest prohibiting out-of-basin transfers of water except under the most stringent of conditions. Such conditions would include, absolutely include, preparation of an environmental impact statement which explores alternatives and minimization of environmental impacts.

Mr. Chairman, I am now going to ask Mr. Wilson, who by the way is a resources planner by training—I am going to ask him to go over a series of additional recommendations.

Mr. WILSON. Mr. Chairman, members of the Committee, my name is Jim Wilson, I am with the Georgia Wildlife Federation. The Georgia Wildlife Federation was party to the National Wildlife Federation's statement along with our sister federations in Alabama and Florida. With that in mind, I do not want to reiterate everything that Dr. Rosen has said, but just add a couple of points.

Our members are vitally concerned about the quality of our water. This extends to the health of not only aquatic life, but human life, as we use and recreate in lakes and streams. We also have to eat the fish from that water and of course it is our drinking water source as well.

We believe that Georgia Department of Natural Resources, county and city governments have done a very good job in reducing urban pollution along the Chattahoochee River and the other metro waterways, but there is still a good deal more that needs to be done, especially if added water availability spurs growth and increases the volume of wastes that need treatment, and there is every reason to believe that that actually will be the case.

While there have been major accomplishments, there are some of those lingering problems and I will just hit a couple of examples, for the sake of time.

One is the City of Atlanta is continuing to discharge raw sewerage which escapes via the combined sewer overflows.

High phosphate loading downstream. This is currently being reduced with some state laws and county laws, as I understand, but this is causing enormous degradation in the West Point Reservoir where many fish kills have been reported.

Fish from the Chattahoochee River below Atlanta continue to be found containing a host of toxics.

A couple of immediate needs. We would recommend that a draft EIS on the reallocation plan be accomplished in the future and we are not absolutely wed to a formal EIS, as it were, but it must be more detailed in terms of the social, economic and environmental impacts of reregulation.

Second, discharges must be eliminated from the combined sewer overflows.

Third, a conservation program must be implemented throughout not only the Atlanta metro area, but indeed basin-wide.

Elements of a suitable conservation plan might include the implementation of realistic pricing of water such as an inverted rate scale where the more you use, the more you pay. Certainly that would encourage some conservation.

I was pleased to hear I believe it was Mayor Jackson talk about improved landscape practices and that metro Atlanta, at least his jurisdiction, is moving in that direction by getting more information out to the general public on how that can help.

He also mentioned the use of more efficient plumbing products, which we heartily endorse.

We are especially interested in some sort of an interstate comprehensive plan for water resources management. I heard Mr. Stevenson mention this morning that Alabama apparently has made some overtures to the State of Georgia and has had no response yet. We will do everything we can here to work with the State of Georgia to get them to respond positively somehow to Alabama's proposal.

We appreciate the opportunity to work with anyone and everyone on these problems and especially we appreciate being asked here to provide our views on these important questions.

Thank you, Mr. Chairman.

Mr. NOWAK. Thank you very much. We will turn to now Bob Kerr.

Mr. KERR. We are going to change the order very slightly and ask Mr. Neuhauser to go first.

[The prepared statement of Mr. Rosen on p. 113.]

Mr. NEUHAUSER. Thank you, Mr. Chairman, Congressmen. I am Hans Neuhauser, I am pleased to have been invited here to testify on behalf of The Georgia Conservancy, a statewide citizens environmental advocacy organization dedicated to the preservation and wise use of the state's vital natural resources, while recognizing the social and economic needs of its citizens.

I would like to make several seemingly simplistic observations about this very complex issue. First, everything is connected to everything else. And second, the long-term solution to the region's water supply needs will require a comprehensive approach that recognizes and equitably distributes the resource among all the users within the 19,000 square miles of the Apalachicola Bay-Chattahoochee-Flint River basin.

I remind you that these users include a broad range of interests from the trout fisherman in the headwaters of the Chattahoochee to the oyster fishermen of Apalachicola Bay. Some of these interests are not able to vote; the ducks in the wildlife areas and the wetlands, for example. And they, like us, are dependent on your leadership to ensure an adequate water supply for all of us, both now and in the future, and also to protect the environment and our quality of life.

At this time, I would like to introduce to you Robert Kerr, a volunteer for The Georgia Conservancy. Because of his long familiarity with this issue, I have asked him to provide additional testimony. Thank you.

Mr. Kerr. Mr. Chairman, members of the Committee and our good friend Mr. Ben Jones, we would like to add our welcome to the Olympic City. The success of Atlanta, as represented by the awarding of the 1996 Summer Olympics, emphasizes the growth and changing need of the metro Atlanta since Buford Dam was constructed in the late 1950s.

I have prepared written testimony and would like to submit that in its entirety and summarize.

Mr. Nowak. Without objection, so ordered.

Mr. Kerr. I agree very much with the water quality comments and questions which have been expressed by our good friends from the Wildlife Federation and will not repeat those. But since the 1940s, the leadership of this area has recognized the ultimate limitations of the Chattahoochee River to meet all of the demands on it. The growth, numerous studies, agreements, debates and proposals have brought the area to the brink of the ability of the Chattahoochee to support these many competing demands.

There are at present four potential sources of water for the metro Atlanta area and north Georgia which offer relief out to approximately 2040-2050.

One is surface waters, specifically the Chattahoochee and Etowah basins which include Lakes Lanier and Allatoona. Proposed regional reservoirs, ground water development, and finally conservation.

At this point, I am pleased with the efforts of the region to promote water conservation, but I think we need to recognize and they need to recognize that much more can and must be done to establish an ethic of conservation in this region. The area is beginning to explore, and will I think make greater use of its ground water resources, and that will be a help.

At this point, the State of Georgia has approved a program to build a series of reservoirs, some five to 12 reservoirs in areas of north Georgia. These reservoirs must be designed and implemented to comply with all federal and state regulations, minimize the loss of wetlands and properly mitigate those losses. In my judgment, reservoirs can be developed within these Section 404 wetland guidelines. With conservation, the reservoirs offer the best near-term solution to these long-term needs.

As you have heard, the current debate and legal action over the proposed additional withdrawals of water from Lakes Lanier, Allatoona, Carter and the Etowah and Chattahoochee basins is impeding the resolution of interim short-term contracts and the Congressional authorization of reallocation of storage in Lake Lanier.

For almost 20 years now, studies have been conducted by the Corps of Engineers and affected parties which have led to the reallocation decision. Participation in those studies has not been denied to our neighbors in Alabama and Florida.

I would like to note, Mr. Jones, to your question that our organization has opposed the reregulation dam as the preferred solution for many of those years. I have been personally involved in those debates.

We determined that the reallocation would be less environmentally damaging to the Chattahoochee River and to the downstream users, particularly in the short area below Lake Lanier, than would the rereg dam, principally on the thermal discharge question, dissolved oxygen and the destruction of 6.3 miles of pristine river.

I believe at this point that the proposed comprehensive study of the Chattahoochee-Flint-Apalachicola Basin should go forward as requested by Mr. Bevill. I strongly urge that a forum for public and interested parties' involvement specifically be required as part of that study process. The problems we face today are caused in part by the perception of parties that they were excluded, that they were not at the table as decisions were made. The possibility of that perception occurring at the end of the next day must be removed from any future study processes in this state. I also believe that the current proposed short-term withdrawals contracts and the reallocation of storage at Lake Lanier can and should occur without any significant change in downstream impacts other than those water quality impacts that have been mentioned. These should move forward without further delay.

Resolution of the long-term—that is, beyond 2010—supply and competing use questions should be a purpose of the comprehensive studies proposed by Mr. Bevill. We are pleased to submit these comments for your consideration and will respond to questions.

Mr. NOWAK. We will now turn to the Sierra Club representative, Michael Wardrip.

[The prepared statement of Mr. Kerr appears on p. 97.]

Mr. WARDRIP. Mr. Chairman, I wanted to clarify—thank you very much for giving me this opportunity to come before you to speak on a very important issue—I am not in fact the President of the Georgia Chapter of Sierra Club, I am at present Water Issues Chairman.

Comments that I give here today are the viewpoint of the Georgia Chapter of the Sierra Club which has approximately 8,000 members here in Georgia. We are part of a nationwide organization, the Sierra Club itself, which has over 550,000 members. We will this weekend in fact meet in a Gulf Coast Conservation Committee with members who are water issue activists from three different states; Georgia, Alabama and Florida, and be developing a regional policy on these particular issues. So we may change some of our viewpoint, I am here on behalf of the Georgia Chapter.

What I am going to do is this, I will probably paraphrase, subtract from, some of the things that have already been said by the gentlemen who are on this panel, and perhaps add to my written comments so I would like to submit my written comments to be entered in the record in their entirety.

Mr. NOWAK. Without objection, so ordered.

Mr. WARDRIP. The Chattahoochee-Apalachicola-Flint and Alabama Coosa basins are watershed resources that should be shared in a partnership between Alabama, Georgia and Florida. It is unfortunate that the debate over how to share this resource has become a struggle with serious political and legal elements. We are pleased in fact that in the short term the parties to the litigation are returning to negotiations under the court-ordered stay in the legal proceedings.

Regarding the Chattahoochee River, the historic position of the Georgia Chapter of the Sierra Club has been in support of reallocation. During the time when a dam was proposed below Buford Dam to reregulate the flow of the Chattahoochee and potentially supply more water to metro Atlanta, the Georgia Chapter along with a number of other conservation groups opposed the project on the ground that it was neither environmentally sound nor financially prudent. Our position was then and still is that reauthorization of Lake Lanier from having first priority of power generation or highest priority of power generation to highest priority of water supply is still a better alternative than a rereg dam.

Our greatest concern, however, is that with the privilege of using more water comes the responsibility to show good stewardship over that resource. Unfortunately, the expansion of metropolitan Atlanta has also brought about a drastic increase in the environmental impacts on its adjacent river corridors. For far too long, we feel, little concern has been shown for those citizens who have had the misfortune of living downstream.

I will not reiterate the comments from the gentleman from the Wildlife Federation regarding combined sewer overflows which I understand that there are efforts at the present time on the part of the City of Atlanta to correct, but in addition to the City of Atlanta, four other Georgia cities operate combined sewer overflows. We feel that this is something that is in clear violation of Section 301 of the Clean Water Act and should be corrected as soon as possible.

With the expansion of urban areas also comes an explosion of the impact of non-point source water pollution. All states are required under the 1987 amendments to the Clean Water Act, to develop plans to blunt the scourge caused by non-point source pollution. In Georgia, the non-point source plan has been somewhat slow getting out of the starting gate.

In addition, we have soil erosion problems. I think that I want to see the focus of our discussion here today to not simply focus on point source, returning water that has been withdrawn from the Chattahoochee. With the new allocations, we will also have continued rapid pace of development which has, I think, a very detrimental impact on water quality in terms of not having a very good record of enforcement on soil erosion laws here in the State of Georgia. Natural systems in many cases do not exist. It would be very difficult to go into many river corridors in the Piedmont region and get a base line study of a natural system. Those current natural systems are under two to three feet of sediment already and biological and chemical oxygen demand is sucking oxygen out of the water at the present time. So we are wanting to see a focus on non-point source on an equal footing with point source.

My point in mentioning areas where serious water quality problems still abound is simply to point up the fact that there are sections of the Clean Water Act that are scarcely enforced, if at all. These regulatory programs that have either been under-enforced or where the rubber has not hit the road, should be allowed time to catch up to the economic expansion that has happened in north Georgia and will most likely continue between now and 1996.

While on the subject of economic growth, I wish to point out that not everyone is desirous of the continuous expansion of metropolitan Atlanta at a pace comparable to today's. A current example, in my own home county of Gwinnett, citizens and homeowner groups are beginning to mount a backlash to unbridled development. There is a perception in the nation's fastest growing county in this decade, that citizens' concern for quality of life is secondary to a compulsion to cater to development community at all costs. There have been some changes on the part of Gwinnett County government to rectify that problem and I want to compliment them on that fact. But the perception still exists in the community.

We must also ask ourselves do we need to use more water in metropolitan Atlanta to improve the quality of life for our citizens or are we simply ignoring our future in order to continue wasteful and careless attitudes of the past. Water conservation is the single largest untapped water resource in north Georgia. Sierra Club applauds the Georgia General Assembly and the Atlanta Regional Commission for enacting new water conservation measures for residential consumers. The job is not done yet. There is still a wide gap between water rates in metropolitan Atlanta municipalities. As an example, here in DeKalb County, which constructed most of its water supply infrastructure in a time when federal grants were more available, DeKalb water rates are the lowest in metropolitan Atlanta. They are so low relative to other neighboring counties that it is hard to imagine anyone feeling a need to conserve unless required to do so by law or by an unavailability of water.

Declining block rates must be totally eliminated and industrial and commercial users should be required to pursue aggressive water conservation measures. Xeriscaping should also be the law of the land. Beyond requiring that water-saving appliances and fixtures be used in new construction, retrofitting programs should be diligently pursued. Retrofitting may be somewhat costly in the short-term, but in the long-term, savings could be very dramatic. In addition, we call on the members of this Committee to support the National Plumbing Products Efficiency Act. Under this Act, nationwide water use efficiency standards would be established for plumbing fixtures and appliances, labeling would be required for water use efficiency ratings and a nationwide data base would be established to monitor water demand and in particular as they relate to plumbing fixtures and appliances.

The Sierra Club is supportive of the U.S. Army Corps of Engineers comprehensive study for the Alabama Coosa and Apalachicola-Chattahoochee-Flint River basins. We feel that the regional planning approach to water resource management is sound. We also feel, however, that this study needs to be broader in scope in terms of its participants. It needs to be an environmental impact statement addressing water quality and water supply on an equal footing. It needs to be an inter-disciplinary and inter-agency effort which includes participation of the Environmental Protection Agency, Fish and Wildlife Service and other relevant federal and state agencies. Comprehensive analysis of natural systems and impacts on habitat and biodiversity need to be evaluated. Assessment of cumulative impacts on both point and non-point source pollution must be done in order to accurately gauge the assimilative capacity of the receiving streams in the study area before potentially increasing the level of insult to the environment.

One key point that has not been brought up is this, a recommendation that uniform standards for water quality, minimum standards, must be established for all states. One state should not be allowed to meet a standard which is less stringent than a neighboring state. Especially this is true when we are dealing with an interstate water resource. The federal government should engage in a more coordinated effort to smooth out the wrinkles in a patchwork of differing water quality standards.

There is perhaps no better example of what I am referring to than the current controversy between Alabama and Georgia over the permitting of a Mead Packaging facility and the Farley Nuclear Power Generating Plant. This current struggle is an outgrowth of poor communication, differing standards and a willingness of two governments to turn the permitting process into a political and legal football.

In conclusion, it is the position of the Georgia Chapter of the Sierra Club that the basic concept of reallocation is sound. However, there have been instances where users have not exercised responsible stewardship over a finite resource that must be shared with neighbors upstream and downstream. As long as flagrant pollution problems and CSOs exist and as long as eutrophication threatens to kill downstream lakes such as West Point, any consideration to increase water withdrawals, especially from the Chattahoochee, should proceed with very cautious consideration of environmental impacts. Too much focus should not, however, be placed on metro Atlanta. Significant population concentrations tend to settle adjacent to reliable water resources. Other cities and industries all along the river corridors in our region are just as responsible for water quality protection. It just happens that metro Atlanta is pushing the envelope in terms of its capacity to expand given current limitations on water resources.

The actions taken by this Committee and also by all those involved in questions of who controls the Chattahoochee-Apalachicola-Flint basin are going to affect the substance and tone of water rights debates into the future. All parties involved should simply make sure that we remember the responsibility we have to protect those resources into our children's future after we are long gone.

Thank you, Mr. Chairman, I will respond to questions.

[The prepared statement of Mr. Wardrip appears on p. 201.]

Mr. **Nowak**. Thank you very much. Thank you all for your statements and your written statements, if you did not have the opportunity to go through the whole statement, will be incorporated in the record so we will have a complete record. Let me turn to Mr. Stangeland.

Mr. **Stangeland**. Thank you, Mr. Chairman. I want to thank this panel for their testimony. I was somewhat amused when Mayor Jackson raised the point of Alabama's sign saying "Alabama is open for business". I think there is one state in this nation at least that as early as ten years ago was advocating no growth, saying come visit but do not stay and that was the State of Oregon. They said we have a beautiful state and we do not want growth to harm that beauty. But there are very strong conflicting desires on the part of people. Some of you are talking about a slower growth approach while other machinery in your area is talking about rapid growth.

To Mr. Rosen and Mr. Wilson, one point I would like to bring up to you is that the Congress I think is very concerned—at least this Subcommittee—about CSOs and their future. And there are many, many municipalities recognizing the harm and the problem with CSOs, but yet there is the cost. I do not know how many billions we have spent to clean up point source and we have not accomplished the goal yet. But in the Clean Water Act of 1987, we recognized that non-point was a serious problem and up to that point it had not been really recognized and addressed to any real extent, and it is something we have to do for the future.

Mr. Wardrip, you talk conservation and I think we have to recognize that we have been a society of waste in a lot of ways. We are wasteful in fuel, we have been burned now the second time, we still do not have a good alternate fuel policy. We have been wasteful in water. I cite the example and anyone who has traveled extensively in the world, will know that in very few places in the world can you go into your hotel, open the tap, put your glass under and drink the water. We just take that for granted and we take it as a never ending supply. Our thinking has to change and I think your groups have to talk more and more about the need for conservation of water because I think you are the people who are the most sensitive to that. Too many people are not sensitive, they think there is a never ending supply coming out of that tap.

So I appreciate your contribution here and certainly look forward to working with you. I hope that you will be part of the negotiation process so that you can discuss your concerns.

Thank you, Mr. Chairman.

Mr. **Nowak**. Thank you. Mr. Jones.

Mr. **Jones**. Thank you, Mr. Chairman. I thank the panel and thank you for your patience today.

I would like to make a couple of comments too. I do not think any of us favor growth for growth's sake. That would be an absurdity and we have seen, particularly in the metropolitan Atlanta region in the last 20 years, you know, an almost unbounded kind of growth, and I am not one who advocates continued growth at this rate of growth. It would not make any sense because 100 years from now we would just be in gridlock and I think in environmental disaster. But if there is a good positive steady rate of growth which I think is natural and I think and compliment you on your concern and the leadership that you have given, to give that growth direction. There have been times when we have gotten past our infrastructure, when we have not been caring about our environment—we have seen that happen, but we have learned a lot of lessons from that too. Yet we must continue to grow, that is also a natural thing and it is a good thing, a positive thing.

My concern is—and I address this particularly to Mr. Rosen and Mr. Wilson, but I would like for anybody to hop in—we have seen the Corps say and we have seen the Fish and Wildlife Service concur, that there is no significant impact from reallocation. And I was one, along with all of you I think, who opposed the reregulation of Lake Lanier and Buford Dam, from an environmental viewpoint. But I concur with Bob that reallocation is a different story. I also think that Mr. Bevill has shown a lot of leadership in looking at a comprehensive study of the whole basin after the year 2010 and it obviously should include environmental impact studies.

Yet, you know, to see the metropolitan Atlanta region, DeKalb County, everybody here has done, I think, a good job in addressing these concerns. We heard Mayor Jackson outline this morning the tremendous commitment, the financial commitment that the cities make, the banning of phosphates and the commitment to stopping the problem of sewer overflow and the cleaning up the discharge. And the State of Georgia has long been involved in long-term planning for water resources. So we have done our job and I think there has been a responsibility here.

Yet to hold our growth hostage in effect, to some indefinite point in time when the folks downstream, to my knowledge, have not been as visionary and have not made the commitment, even the environmental commitment, that this region has made, seems to me to be wrong.

I wonder if you could comment on those concerns and if you could tell me whether or not those communities, those cities, those governmental bodies in Alabama have been—and in Florida—have been as visionary and as responsible in addressing these concerns.

Mr. ROSEN. Mr. Jones, that is a lot of questions at once. I will be happy to answer them in turn if I can remember them all.

I do not believe that at least the National Wildlife Federation has advocated no growth or even slow growth.

Mr. JONES. I was not suggesting that.

Mr. ROSEN. Okay. I do want to make that clear because I believe that we can both have growth and adequate water. In fact, one of our water resource planners, a specialist in conservation, has examined the water availability and the water needs of Atlanta, has recently had published in the Journal-Constitution an article, "Saving our Way out of the Water Crisis", it is this expert's opinion—and he is an expert because he does work on these water conservation issues on a national basis and has helped many cities—he believes that Atlanta has all the water it needs for the current and even near-term projected growth, if they would simply take major conservation steps and take them now. They are fairly simple steps, we outlined a few and we outline more in our written testimony and he outlines a whole bunch of them. This was in the Sunday Perspectives section of the newspaper. Hundreds of thousands of people probably read this. There are some answers here. That is one way of addressing it.

You mentioned the Corps of Engineers study. Well, my—and I read this study——

Mr. JONES. The Post Authorization Change.

Mr. ROSEN. The Post Authorization Change, I read it, I probably did not read all the appendices. I may be one of maybe only a few hundred people who actually did read it. And I was very much impressed by the Corps' detailing of changes in water flows. They did have studies, they did have models, but in the areas of water quality and cumulative impact and conservation in projecting growth, they did not evaluate that. They said something about, but what they said was not substantiated by citations that appeared relevant. In fact, these issues were glossed over. In that report, the

U.S. Fish and Wildlife Service had an analysis or a statement that was associated with the report and that report did not even recognize that we had water quality problems in the West Point Reservoir upstream to Atlanta. And I wrote the Fish and Wildlife Service and I said you did a tremendous job evaluating effects on fisheries downstream, probably no impact, I agree. As a fisheries—an aquatic biologist, I agree with that. But I said I also agree that there may be water quantity changes near to Atlanta that would affect water quality, especially if we have increased discharge of pollution, especially non-point pollution, which is not treated by the primary treatment plants, being discharged into the river in different amounts of flow in the river on an instantaneous basis, not a monthly average but on an instantaneous basis. And I said to the Fish and Wildiife Service, did you not know, they said no, we did not, we missed that and we need to go back and review it again.

I think if you read the report that came out of that, you will get a little bit different picture than is painted by the Fish and Wildlife Service simply acquiescing to the Corps of Engineers' plan. They have got concerns, they have got questions. Their testimony indicates that they have got questions about cumulative impacts. Cumulative impacts are important, they need to be looked at. The Corps did not look at them. That is what we are asking be done and the EIS is a good way to have it done because there is accountability in the environmental impact statement process and there is also judicial review. And in other forums that may not be possible, but we would be satisfied to see the basic questions answered with substantive studies, citations.

And then I think we need to go beyond and start looking at long-term resources planning because frankly there are some problems with what is being offered in the reservoirs program right now. We are looking at the very first permit for a regional reservoir, and the very first does not include an environmental impact statement. We have no region-wide environmental impact statement on the potential environmental consequences of the reservoirs program. I agree with Bob Kerr, I think we can deal with the wetlands question, but we need to be looking at it more carefully and on a regional basis.

There are tremendous lacks here, and I think the public deserves more and I think we can get it, and I think this Committee knows how to give it to us and I think the people that have testified here know it needs to be done too. But we need to get started right away because I agree with you, I like to water my lawn and we had watering restrictions this year, and I did not enjoy that and neither did my neighbors.

Mr. Jones. I appreciate your comments, and I appreciate too your earlier comment that the comprehensive study and this whole matter needs a whole lot more input from state and local and businesses, whoever, but as you know, the comprehensive study was developed solely by the Corps of Engineers without any—specifically without any state or local input and I think that may be much too narrow. I would like to know if Mr. Kerr would like to comment on that.

Mr. **Kerr**. Let me address a couple of questions you have referred to. One is the standards question. The State of Georgia has moved forward in recent years, albeit sometimes kicking and screaming, to a higher set of water quality standards than perhaps other states nearby have implemented, and is in the early throes of implementing some of those standards.

Secondly, in the last session of the Georgia General Assembly, we were able to put together a water quality package and get it passed that I think will address a lot of the concerns that downstream and nearby users have about the effects of growth in the metro Atlanta area. That is only going to be effective if those programs are carried out, those laws are implemented well and if the funding is there to allow that to occur. That is my major concern at this point about some of those.

There needs to be, as Rudy has pointed out, comprehensive analysis of water quality impacts from cumulative growth, and that is a very important piece of this and needs to be addressed very strongly by not only state and local governments but by the Congress.

The water supply issue is another piece of that, if you will, puzzle. The growth in Atlanta is going to occur. It is not will it occur if we allow some additional water—it is going to occur. And what we are looking at is how to cope with that growth by being out in front of the curve with our infrastructure development as opposed to trying to always be on the catch up and correcting problems—preventive maintenance, if you will. And that is why we have come down principally on the side of reallocation of Lake Lanier, from a water supply standpoint as the near-term solution.

Back to the standards issue, we do not believe that Alabama, for example, has as stringent water quality standards as the State of Georgia has now adopted, particularly in the monitoring of their operations and their withdrawal permits and all of these sorts of things. For that reason, we recently opposed the issuance of a permit to Mead Packaging and to Farley Nuclear Power Plant for additional withdrawals and effluent discharges into the Chattahoochee River, principally because the standards were lower, and secondly because those are waters of the State of Georgia and they did not consult with or pay tribute to the requirements of the State of Georgia standards.

Mr. **Jones**. Mr. Chairman, I do not have any further questions. I would very much like to thank you and once again compliment you on your vigilance in environmental protection and awareness and all that you have done for our state. I thank you very much.

Mr. **Nowak**. I too would like to thank this panel. I think they have played an important part and are going to continue to play an important part in bringing all the parties together and I hope some of the public officials from the three states, that you can work with. I think it is a role that is becoming more and more important all through this country. These organizations that you represent here of course have national and in fact international constituents who are starting to participate on a worldwide basis, and the problems that you have here are of course magnified many times over when you look at this world community and the redistribution of rainwater that comes through the system and starts to affect all of our little areas and you get down into a very small portion of that and you generate these huge problems. You mentioned conservation and the plumbing changes that are being suggested and in some areas adopted, and we always see that they are adopted where there is incentive to adopt.

Just to throw out a for-instance, if you are going to look at—I guess somebody mentioned watering your lawn, you enjoy watering the lawn. Out in Scottsdale, Arizona, you get your taxes reduced if you build a home in the natural state of the desert as you found it, around your house. And the natural state, of course, does not include any grass that you have to water and just pour tons and tons of water on that to keep it half green. And those kinds—instead of looking at a penalty, if you can look at some incentives and build those into the structure, you have whole subdivisions without one blade of grass, without one tree, and just the natural habitat of the desert. And you say well you know, nobody will buy that home. They are more popular than three blocks away where you put up your lush lawns. But there is an incentive to do that.

When we look at their water problems, it is going to be very similar to this area I would think in a few years, and all of those things are going to have to, as you mentioned, play a role as you look to try to solve this problem.

But I would hope that you continue to not only monitor the situation, but get your input into the three state agencies so that everybody is able to move forward together and you can have growth that, you know, is compatible with your economy, but your environment.

We will be taking a look at the CSO problem and the Clean Water Act. As you know, the Subcommittee will bring that whole revision out next year and we have received numerous days of testimony on the CSOs. It is not only in Georgia, of course, it is all over the United States. And we look at the Clean Water Act and the expenditure of $58 billion from the 1972 appropriation to the present time, and you say well we have solved possibly 90 percent, maybe 85 percent of the treatment going from primary to secondary and we have got those on tap. Now we have not solved the CSO problem and looking at the size of that, if you go to an engineering solution of that CSO problem, for a small area—the Mayor of Richmond came forward with their engineering study—and there was substantially more than going from primary to secondary, in their particular area. A very short survey of some of the League of Cities that are members of that organization showed if an engineering solution is adopted, we would be spending—not for every city, but just for their "membership" cities, somewhere in the area of $117 billion, which would dwarf of course the primary clean water program that has got us into, the majority of our cities anyway, into the higher level of treatment.

So we have got to look at conservation. You are not going to advocate on a local level to raise those kinds of dollars for immediate correction and yet, you know, as we move forward we have to go along, and the short-term and the long-term answers are still going to be from conservation, that really provides an incentive to do those things which are going to allow you to grow economically.

But again, thank you for your testimony. We will be working with your national organizations as we review all of these projects throughout the country, and of course, this is a small part of that larger program of the comprehensive outlook I think that you have all advocated. But we have got to find the incentives to pull them into the system.

You know, we talked about WIN with inflation and everybody wore buttons. We were going to conserve gas and when gas finally got up in price, all of a sudden there was a ton of conservation and people stopped driving. We did not do anything about it and now we are in the same predicament ten years later. Hopefully we have learned something and we can move forward from this point. Thank you again for your testimony and we will get back to you with any further questions.

We will now take a five minute recess and I would invite, however, during that five minutes, the last panel to come forward and take seats so we can begin your testimony and not hold you up any further. Thank you.

[Recess.]

Mr. Nowak. The Subcommittee will come to order. We will turn to our fifth panel and our first witness from Columbus Water Works, Billy Turner. We will take all your written statements in their totality and incorporate them into the record and let you proceed as you so desire.

TESTIMONY OF BILLY G. TURNER, PRESIDENT, COLUMBUS WATER WORKS; G. STANLEY HILL, VICE PRESIDENT, OGLETHORPE POWER CORP.; TOM BARTLES, ALABAMA MUNICIPAL ELECTRIC AUTHORITY; J.E. ROBINSON, MANAGER, SNAPPING SHOALS ELECTRIC MEMBERSHIP CORP.; RON SEDER, PRESIDENT, LAKE LANIER PROPERTY OWNERS ASSOCIATION, INC.

Mr. Turner. Thank you very much, Congressman Nowak and members of the Subcommittee.

First of all, let me say that Columbus is a community located about halfway between the headwaters and the point at which the Apalachicola goes into the Gulf and we are in some ways considered a downstream community. We are located in Congressman Richard Ray's Eighth District and we are located just below where the Chattahoochee River begins to form the Alabama/Georgia state line.

As President of the Columbus Water Works, I serve at the pleasure of the Columbus Board of Water Commissioners which was established by a 1902 Act of the Georgia legislature and who are today appointed by the council of Georgia's oldest and only functioning city/county government. Our organization is therefore an executive branch of the consolidated government of Columbus/Muscogee County. Columbus is the economic center of a 12-county Georgia/Alabama region of about three quarters of a million people.

Our responsibility, since the Board's inception in 1902, is to provide water supply for the citizens of Columbus and since 1950 when the city assigned the responsibility for the sewerage system to the Board, we have assumed the ever-increasing complex service of wastewater treatment. We are one of those cities in Georgia with a combined sewer overflow problem and we face the difficulties of a

1989 Georgia law that says we must finish our program by the end of 1993. We wish there were more guidance at the federal and state level as to how to solve this problem, both from a technical and economic standpoint.

Columbus is an old, old town, established by the Spanish at a location where the river falls over 100 feet and which in later years was the location of significant American Indian and Civil War history and today is proudly the home of Fort Benning from where the 197th Army Division has recently departed to be a key factor in Operation Desert Shield.

Columbus became a Georgia city in 1823 and began to take water supply from the Chattahoochee River almost 80 years ago, in 1913. Back then as well as today, the principal concern about the use of the water from the Chattahoochee was water quality. The paper that I have submitted states that there are many needs to which the Chattahoochee River must respond; however, the most critical need of the river which transcends the many uses, is water quality.

We further state in our report that we believe the water control plan of the Chattahoochee-Flint-Apalachicola River system should have as its foundation a not-just-by-chance occurrence of an overall plan for maintenance of water quality. The basis for this water quality plan must be established on the solid foundation of a sustained minimum flow. Many of us, both up and downstream have raised their voices concerning the reallocation of water for water supply in Atlanta, but I am here today to state that upon further study, we have concluded that reallocation has a potential for improved river flow during drought conditions. Let me emphasize "potential."

In addition to my prepared paper, I have submitted two letters; one from the Georgia Department of Natural Resources and one from the Mobile Office of the Corps of Engineers. They provide the information that suggests the foundation for maintenance of a water quality plan minimum flow may be enhanced downstream due to the reallocation. The enhancement of this minimum flow will not occur to downstream users and in fact may reduce the low flow to a severe level unless it is incorporated in the Corps proposed water quality plan. We have presented specific numbers in our submitted statement t hat shows past impacts of the operation of the system on river flows.

In conclusion, we strongly encourage this Committee to use its considerable influence to intervene in the water war with Alabama and Georgia and to effect a solution not just centered on a single need, the water supply of Atlanta, but a much broader and better goal, water quality for all the river's users. We believe the common interest of all river users, water quality, can be positively impacted through the river system as a part of reallocation at Lake Lanier. It will not just happen, however, it must be planned. Commitment to a sustained increased minimum flow for all users of the river seems possible as a part of the reallocation and water control plan. A sustained minimum flow could be a key component in resolving the concern of downstream water users.

To further refine the Columbus position, let me state our constructive solution to the problem.

(1) Provide through the water control plan for a minimum seven-day average flow at Columbus and other downstream locations, for water quality protection by properly controlled releases at West Point Dam and subsequent Georgia Power projects and other federal projects.

(2) Provide for the best technically available wastewater treatment for all Atlanta area discharges.

(3) Provide the water conservation programs in metro Atlanta that maximizes return of flows to the Chattahoochee River.

(4) Carefully consider the elimination of diversion of Chattahoochee River withdrawals to the Ocmulgee and Flint River and return them to the Chattahoochee River.

We appreciate you talking the time during these critical days in Congress to come to Georgia to hear about this very important situation.

Mr. NOWAK. Thank you very much. We will hold our questions and go to the Oglethorpe Power Corporation, Mr. Stan Hill, who is a Vice President. Mr. Hill.

[The prepared statement of Mr. Turner appears on p. 179.]

Mr. HILL. Thank you, Mr. Chairman, members of the Committee, Congressman Jones, we do appreciate the opportunity to come and talk with you about this very critical issue.

Oglethorpe Power Corporation is the power supplier for 39 of the state's 42 rural electric cooperatives and as such, we serve two million people throughout the entire state. Power that is generated from Lake Lanier, Buford Dam and other Corps of Engineer Projects in the southeast, go to all of these consumers in Georgia as well as others in the southeast. So I would like to focus the Committee's attention for a few moments on the hydropower interests.

Mr. Chairman, we do have a written statement that we would like to provide for the record and I would like to make some additional comments, if that is permissible.

Mr. NOWAK. Without objection, so ordered.

Mr. HILL. Thank you, sir.

Let us go back just for a minute to the inception and construction of the Lake Lanier Project. As you know, this does require federal action. When the Congress agreed to build the project, they had to look at a cost/benefit that would say that the project can be paid back. As they looked at how this was to be done, flood control was a major issue, navigation and power generation. They deemed these to be primary interests and that the power interests would pay back the primary part of the construction. As a matter of fact, the power interests have paid back about 80 percent of the project cost. Information for Mr. Stangeland, this is not being paid back by Georgia Power Company, but by the municipal and rural electric cooperatives throughout the southeast. So the payback has continued.

There has been a lot of conversation today about long-range planning. This has been a necessity in the power industry because we are forced to plan long-range due to the nature of our business and how long it takes to build power plants. When we agreed to enter into contracts with the Southeastern Power Administration to buy this power, it was to be bought for the long term, for the life of the projects. This is a very important part of our total power supply. If we lose power at this project and others, we must go out and buy that power at some other source. The sources we would be looking at are coal-fired and/or oil. Right now the Congress is taking up the very critical issue of the acid rain or clean air bill, we have the Middle East situation, so to the degree that we have to find our power sources from other areas, it presents a real problem, not just for us, but for the country as a whole.

But as time has passed and as the population of Georgia and metro Atlanta has grown, certainly we must also recognize that there are other uses for this water that are very important. To that degree, when the issue of reallocation was brought forth as a mechanism to solve some of the competing uses problems, we felt that offered a very good solution. Rather than to continue to talk about this issue, we decided to do something about it and sat down in negotiations with the Department of Natural Resources, Atlanta Regional Commission, worked out what we think was a very good settlement to reallocate some of the storage capacity at Lake Lanier from hydro-power generation to water use. The results of that negotiation was put into a form of a bill that we hope that this Committee and others will help us to get through the Congress in 1991. We feel like that this type of recognition that there are other interests and that these interests should come to the table and pay their share of the costs that are involved in this important quantity, can serve as a model for other parts of the country as well.

So, Mr. Chairman, we would go on record as supporting the reallocation of Lake Lanier and would like to state that the power users throughout the southeast who are recipients of this hydroelectric power are in agreement with that concept as well.

We do have Mr. Pinckney Roberts who represents the rural electric cooperatives in South Carolina here today, he is also submitting a written statement for the record. We also have some written statements I believe that will be put on the record from North Carolina and Alabama and Mississippi as well.

Mr. Chairman, thank you very much for the time to present this information. I would be most happy to answer any questions that you or the Committee might have.

Mr. NOWAK. We will move to the next witness, Mr. Tom Bartles, Alabama Municipal Electric Authority. Mr. Bartles.

[The prepared statement of Mr. Hill appears on p. 85.]

Mr. BARTLES. Thank you, Mr. Chairman. My name is Tom Bartles and my boss' written comments, Robert Claussen, I believe have been provided to you. He is General Manager of the Alabama Municipal Electric Authority, a joint action agency consisting of 11 municipally owned electric utilities in the State of Alabama. Members of AMEA purchase all of their power needs from us except for the power purchased from the Southeastern Power Administration, the agency that markets preference power produced from the Georgia-Alabama system of projects operated by the U.S. Corps of Engineers. AMEA's members have a vital interest in the Corps' operation of the Georgia-Alabama system projects, including those projects in the Apalachicola-Chattahoochee-Flint basin.

AMEA is also a member of the Southeastern Federal Power Customers Group, which is an ad hoc association of rural cooperatives and municipally owned electric systems located in the southeast states of Alabama, Georgia, Mississippi, North and South Carolina, which purchase SEPA power. These cooperatives and municipal systems serve over eight million consumers in the region.

AMEA has not only an interest in the reallocation of Lake Sidney Lanier, but a history of involvement in the proposed reallocation as well. We were among the power customers who negotiated the proposed agreement for reallocation. When the reallocation was initially proposed, we agreed not to oppose it, provided a legislative proposal would ensure that power customers receive fair compensation for replacement power costs and downstream interests could be satisfied. Thus, we worked along with other regional power customers, with the Georgia Department of Natural Resources and the Atlanta Regional Commission to develop an equitable plan for the reallocation.

Specifically this customers group developed a methodology for calculating the compensation due to the power customers as a result of the reallocation. After extended negotiation, the parties agreed upon a lump sum payment as fair compensation to hydropower generation. The payment was intended to represent the total replacement power cost arising from the reallocation over the life of the project. Our customers agreed to the lump sum settlement of the reallocation based on the assurance from DNR and ARC that adverse downstream effects would be mitigated. This agreement was incorporated into draft legislative language which to date has not been introduced.

As the power customers and water supply interests were coming to an agreement, interests in Alabama, Florida and southern Georgia began to voice concerns over the potential downstream impacts of reallocation. We have continued to attempt to play a constructive role in resolving the issue of impacts downstream.

In light of the specific project purposes that Congress considered in authorizing construction of these projects, if benefits are diverted from a project's stated purposes, then these purposes should be fairly compensated. In the case of Lake Lanier, we as hydro-power customers, do not want to stand in the way of the needed water supply for the residents of metro Atlanta. However, we do assert that any reallocation of water storage should be accompanied by a reallocation of costs and appropriate compensation.

The reasonable resolution which the power customers and municipal water users have negotiated with respect to Lake Lanier stands in sharp contrast to the unprincipled position which the Corps of Engineers has struck with respect to recreational usage of federal power projects in the southeast. In the past several years, particularly in light of the drought, the Corps has altered project management to accommodate recreation, which is not an authorized purpose of the projects. The Corps' decisional process has ignored Congressional project authorizations, the federal government's contractual obligations and the impacts on downstream users, who have relied upon historical levels of releases to meet downstream water supply, water quality and recreation needs.

The Corps' management in the southeast is symptomatic of a national problem—in too many cases the Corps has substituted its judgment for that of the Congress in establishing water use priorities. The Corps has ignored the economic basis on which projects have been built and costs repaid.

AMEA believes that legislation needs to be developed to achieve a fair balancing of these competing uses and ensure that all Corps decisions with respect to operations at federal projects are made with public involvement, economic analysis, a matching of costs with benefits and attention to Congressional authorization.

We appreciate your past and future support in these efforts. Thank you.

Mr. NOWAK. Thank you very much. We will now turn to Mr. Ed Robinson, who is the Manager of the Snapping Shoals Electric Membership Corporation.

[The prepared statement of Mr. Bartles appears on p. 75.]

Mr. ROBINSON. Mr. Chairman, members of the Committee, I am Ed Robinson and I am Manager of Snapping Shoals Electric Membership Corporation, which is headquartered in Covington, Georgia, which is the county in which Representative—Congressman Ben Jones resides, and we are real proud to claim him.

On June 13 of this year, I took about one minute to reflect that I had been in this business for 50 years on that date. There is a lot of water, if you will pardon the pun, that has rolled over the dam during that time. I have seen many changes, most of them have been for the good, but I say this just to tell you that I have got a lot of scars from a result of a lot of fights that we have participated in.

The greatest fight I think that we have ever participated in was the development of the river basins in Georgia, and I say this sincerely, that if it had not been for the effort of the rural electrics in the State of Georgia, not many of the dams, including the Buford Dam, Lake Lanier, would have ever been developed. Now these dams were developed primarily for flood control, but power of course pays the freight.

We wish that some of our friends that have testified here before us would have helped us when we were in these bloody fights, many of them opposed us. But yet, we got them built and as a result, we do have the possibility of providing an adequate water supply for the State of Georgia for many years to come.

I would like also to re-emphasize what Mr. Stan Hill, who is Vice President of Oglethorpe Power Corporation, our power supplier, said, that the Georgia Power Company never participated in the paying for any of these dams. As a matter of fact, the only thing that I ever remember them doing was using their money to resist their being built, they fought them very vigorously.

Along with the power that we purchase from Oglethorpe Power Corporation, we also purchase power from the Southeastern Power Administration. I am coming to you now from the standpoint of one small individual cooperative, one of 42 cooperatives in the state, one of a thousand in the United States, because I want to emphasize how we benefit from these resources. It is a resource that is replenishable. It is a resource that does not pollute in the production of power, in many ways.

Throughout the state, rural areas are facing increased economic hardships with the loss of agricultural and manufacturing work forces and the subsequent erosion of local tax bases. The ability to attract new business is of vital importance to our rural areas, and a key factor in that effort is reasonable rates for electricity. Being forced to replace the valuable power that Snapping Shoals EMC currently purchases from the Southeastern Power Administration without compensation would place undue economic hardship on our consumer owners. For that reason, we believe that the settlement reached to reallocate some of the water storage of Lake Lanier from hydro-power to water use is a fair and equitable approach to providing the water supply needed by the Atlanta metropolitan region. This would not harm the rural electric consumers. The process set forth in the negotiations between the hydro-power users and the Atlanta Regional Commission can be a precedent setting model for the country in addressing competing uses at Corps dams.

It is imperative that the Atlanta region find a new source of municipal and industrial water supply in order to accommodate existing needs as well as to remain health into the 21st century. We believe that to stifle the growth of the Atlanta region would be detrimental to the remainder of the state and the region. Just as important however, is for the Atlanta metropolitan area to recognize the importance of electricity generated at Lake Lanier. The settlement reached between the hydro-power consumers and the water users to replace SEPA power assists Snapping Shoals in continuing to provide electricity to our rural consumers in the most cost-effective manner. Furthermore, the ability to provide economical power to our consumers contributes to the efforts of the rural areas in attracting new industry as well as maintaining existing businesses.

We commend the Committee and especially Congressman Jones for his leadership in resolving these difficult issues. We especially appreciate Congressman Jones' effort with all of the urban problems that are in the Fourth District, he still has given a lot of his valuable time to helping us in the rural areas resolve our problems.

Thank you very much, Mr. Chairman.

Mr. NOWAK. Thank you very much. We will now turn to our last witness who is President of the Property Owners Association around Lake Lanier, Mr. Seder.

[The prepared statement of Mr. Robinson appears on p. 111.]

Mr. SEDER. Thank you, Mr. Chairman. I guess I too would like to make sure that the written testimony gets into the record.

Mr. NOWAK. Without objection, so ordered.

Mr. SEDER. I am the President of Lake Lanier Property Owners Association, which is an organization of about 2000 families who own property around Lake Lanier. We are interested in the health of Lake Lanier for its quality of life and recreational economic benefits. Lake Lanier receives, as you probably know, more recreational visits than any other Corps of Engineers lake. There are several legitimate uses of Lake Lanier waters, and during dry times there is not enough water in Lake Lanier to satisfy fully all of the requirements. Therefore, water allocations have to be made against some pre-arranged criteria. Obviously the criteria should be established to give a fair and wise allocation of the water. It is important that correct facts and evaluations be available to establish the proper water allocation.

We have studied the Lake Lanier water reallocation recommendation in the Corps of Engineers' October, 1989 Post Authorization Change Report and we found several problems with the report. One consequence of the recommended reallocation is that it will reduce Lake Lanier to unprecedented low lake levels. The report shows that if the full recommended year 2010 reallocation had been in effect during 1986 to 1988, the average lake level would have been six feet lower than could have been achieved without reallocation. And I want to point out that Lake Lanier levels during those years were already very low.

Our analysis of the Post Authorization Change Report exposes several significant material errors in the report, and some of these errors are: It does not consider local economic consequences; it seriously understates the impact a lake level change has on recreation and the resultant economies; it significantly overstates the amount and value of lost electric power generation; it considers Lanier the only source of satisfaction for a growing water supply demand and it concludes that the effects of reallocation on recreation are minor and acceptable.

Part of our analysis is based on a study done for the Corps and published in 1979. That study is titled—and I have it in my hand—"Lake Lanier Management and Economic Impact Study." It was done as part of an earlier water resources study. The study shows that a change in lake level produces a 12 times greater impact on visitation days to the lake, consequently recreation, and a 70 times greater impact on economy than the Post Authorization Change Report identifies.

For example, the Post Authorization Change Report shows a $596,000 annual reduction in the national economy for the years 1980 through 1988, while the Lake Lanier management and economic study—impact study methodology—shows a $40 million impact to local economies.

Our analysis also discovered that the electric power generation lost because of the proposed reallocation is significantly overstated in the Post Authorization Change Report. For example, the report shows a 50-year loss expressed in current values of $7.1 million. Our analysis displays the real loss to be more like a million dollars.

Now those foregoing differences demonstrate the Post Authorization Change Report seriously undervalues the proposed reallocation impact on recreation and significantly overvalues its impact on electric power generation. Therefore, the decision criteria incorrectly favor power generation over recreation.

On the subject of water supply sources, the Post Authorization Change Report considers Lake Lanier the only source of satisfaction for the growing water supply demand. Ground water, as has been discussed here today, or wells, and more smaller reservoirs which are considered feasible alternatives by some experts, are not considered alternate solutions in the report. Furthermore, the report only satisfies the water demand until the year 2010 and then supposedly Lake Lanier will not be used to satisfy additional water supply requirements; therefore, alternative solutions have to be found for the post-2010 demand. Those solutions we believe should be identified and implemented now to relieve some of the pressure on Lake Lanier.

By way of summary, the conclusions and the recommendations in the Post Authorization Change Report are based on some incorrect and important inputs. The work needs to be redone with corrected inputs to allow a fair and wise allocation of Lake Lanier waters.

And let me thank the Committee for hearing my testimony.

[The prepared statement with attached table of Mr. Seder appears on p. 124.]

Mr. **Nowak**. Thank you, Mr. Seder.

You brought up this difference between the other testimony. Of course, you represent 2000 people that are owners and you mentioned there are 40,000 other people that use this lake in a recreation sense?

Mr. **Seder**. The number of visitations to Lake Lanier in a year would run today in the 18 to 20 million visitations a year. The 40 million I talked about was the impact on the economy is we implemented reallocation and laid it against 1980 through 1988.

Mr. **Nowak**. I see. I take it that, Mr. Robinson and Mr. Bartles, you do not agree with the statement that the power costs have been overstated—or do you?

Mr. **Hill**. Mr. Chairman, we have not taken a look at Mr. Seder's numbers in any detail. We would be happy to do so, but our numbers certainly do not show a loss based on the current allocation that the ARC would like to have at Lake Lanier, to be a million dollars. The settlement number we arrived at for the life-of-the-project type calculations was $62.5 million. Those are the numbers that we see as the loss/benefits that would occur under the settlement agreement that we worked out with the water users.

Mr. **Nowak**. Let me turn to Congressman Stangeland.

Mr. **Stangeland**. Thank you, Mr. Chairman.

Mr. Turner, just briefly so I have a picture of what you were trying to bring out, you talked about minimum flows and I think just in going through your testimony you say in the 1986-1988 drought, the flow was about 1120 CFS and the reallocation, because of creating wastewater, would bring in an additional 120 to a flow of 1240 by 2010. Is that the minimum flow, is that the adequate minimum flow? What are you talking about when you say we ought to provide for a minimum flow, average minimum flow, that we should not go below?

Mr. **Turner**. Well basically our—we are downstream from a number of river control projects, so the flow during drought flow periods is controlled by those projects. And the minimum flow at Columbus in the past has been in the range of what you suggested and we are saying that it should be retained at nothing below that level and enhanced some if possible because our current requirement based on our current wastewater treatment plant of 40 million gallons, we require, according to the state, about 1128 seven-day average CFS, 1128 CFS, for the dilution of that 40 million gallon flow, and for us to have some potential for future growth without excessive cost, we need a little bit of additional flow during the minimum flow period and the reallocation can provide for that.

Mr. **Stangeland**. Thank you.

I want to thank this panel, Mr. Chairman. I have no further questions, but I think there testimony is helpful.

Mr. **Nowak**. Let me turn to Mr. Jones, our host.

Mr. **Jones**. Thank you, Mr. Chairman. I would like to thank the panel for bearing with us today, and for your testimony.

And Mr. Chairman, I also think it is important that we add to the record at a later date some resolution of this major disagreement, Mr. Seder's estimate of a power loss of only a million dollars and if Mr. Hill could respond to that, because I think it is $62 million you are talking about, and that is such a difference—statistical difference there, I would appreciate it if we could resolve that or at least allow that response.

I do have some questions. First for Mr. Seder.

You spoke about the years 1986 and 1988, they were, were they not, drought years?

Mr. **Seder**. Yes, they were.

Mr. **Jones**. So the lake was way down anyway, as we all remember and recreation was impacted in fact, is that not correct?

Mr. **Seder**. That is correct.

Mr. **Jones**. What we are looking for though is the impact on recreation that we would have during normal rainfall because, you know, that would happen anyway in a drought year, that is a problem that you all always have up there in droughts.

Mr. **Seder**. But it would have happened more during those years with this reallocation, Congressman.

Mr. **Jones**. To what extent?

Mr. **Seder**. Well if I looked at the years 1980 to 1988, the reallocation would make the lake 2.4 feet lower on average for those years than it was.

Mr. **Jones**. But that average includes the drought years.

Mr. **Seder**. That includes the drought years.

Mr. **Jones**. So if the lake is already way down—that is what I am talking about—just in a normal year, not including the drought years.

Mr. **Seder**. Even in the drought years when the lake is way down, it would take it down more and impact recreation more.

Mr. **Jones**. To what extent?

Mr. **Seder**. A rule of thumb can be developed. The study that was done ten years ago has a curve and it shows for each level of lake, as you reduce it, what the impact is to visitations to the lake.

Mr. **Jones**. But as I recall in those years, there was not any water in sight and all the boats were sitting up. So what is the difference, I mean, between, you know, if the water is two or three feet further away from a boat that is 40 feet from the water.

Mr. **Seder**. I guess if you already cannot use the lake, it does not make any difference.

Mr. **Jones**. Well that was my point exactly. But in normal years, we agree that the impact would be insignificant?

Mr. **Seder**. Let me make a couple of points. One is, reallocation would force us to those levels sooner than we would without reallocation, thereby impacting recreation. Not just in those years but in years where we get close to those levels, reallocation would push us into those levels. Do you follow?

Mr. **Jones**. I do follow.

Mr. **Seder**. That therefore would impact——

Mr. Jones. You are saying that in the normal year, average rainfall, that the lake would be how much lower?

Mr. Seder. I do not know the answer to your question. The corps tells me that in a normal year the lake will not be impacted very much. My response is that almost by definition half the years have to be worse than normal.

Mr. Jones. Well could we not also make the case though that without reallocation—and the case has been well made today, there is no doubt about it, it is going to have a very deleterious negative economic impact, and that that too would affect the recreation dollar and visitation at our lakes.

Mr. Seder. If you assume that the only way Atlanta can grow is to get water from Lake Lanier, that argument might have some merit. But I do not think that is the only way Atlanta can grow.

Mr. Jones. I do not make that assumption, but as you know and as I stated earlier, I do believe that this is one of the ways and certainly until the year 2010, and I would like to point out that the state does have, you know, a regional reservoir program so that this is being addressed in I think a visionary way.

I thank you for your very articulate testimony.

I wanted to ask Mr. Turner about this minimum flow thing. That flow is controlled at West Point rather than up here.

Mr. Turner. Yes, it is. The potential impact is—how much water goes into West Point, the potential impact might be during minimum flow periods, and I do not know that I have the ability to study that as effectively as the corps possibly can in terms of the current water loss, the 30 percent that is lost, of the water would potentially have its greatest impact during the drought flow period in that it would reduce water from what is referred to as the conservation pool. It is only when water is available in the conservation pool, as the corps refers to it, can they continue to maintain the flows on down the river. What we are asking is that it be included as a part of the corps' plan, as it is in Atlanta, where they maintain a 750 minimum CFS, to identify a point on the river at Columbus where there is a target minimum flow so we will know what our target is for protection of water quality.

Mr. Jones. Yes. But we all are in agreement that at West Point there is a whole lot more water, three to four times as much water, coming out of the Chattahoochee there than there is coming into Atlanta.

Mr. Turner. Much less storage.

Mr. Jones. Yes, sir.

I guess my general question, and I see our time is getting on and our friends are going to go down to get the Florida perspective—part of what they are going to be hearing about are those downstream concerns and I would like to get your opinion, if you have this minimum flow, of the impact on those concerns that we have heard about, the water quality in Apalachicola Bay and its effect on—I know we are not wildlife experts, but on the oyster business and barges, if we have what you talked about.

Mr. Turner. Well you are certainly correct I am not an expert in those areas and I cannot comment from any expertise or anything. As it impacts Columbus, the reference to average flow going up or down one or two percent does not have any significant effect on the kind of water uses that we would have there. The only impact that we can identify from this reallocation issue is in the water quality area in which we need a certain amount of water for dilution. And I believe that would, if it were maintained as a planned minimum flow, then you could provide planning for enhancement of water quality conditions on downstream. And I believe if you look at the flows that go through the different reservoirs down the rest of the river, there is not much planning for sustained minimum flows through those projects, only at Woodruff is there a commitment to a minimum flow. There is flow that goes through there, there has been a good program in the past for minimum flows, but in the future, we need I think to zero in on some sort of specific plan so that our wastewater treatment facilities and our combined sewer treatment facilities and our urban run-off permitted treatment facilities match what the minimum flow is going to be, because that is well known to be when the most impacts take place on water quality.

Mr. Jones. I thank you very much for that response.

And Mr. Chairman, I would like to thank this entire panel; Mr. Ed, I appreciate you coming over; Mr. Bartles, Stan, Mr. Seder, all of you, thank you very much.

I believe, if I may sum up my feelings on this, you know, wars are fought when there is not enough to go around, wars are fought—but they are not fought when there is plenty to go around. And I think, as we have seen today, the expertise and the talent and the determination to solve this problem that we have seen from all these panels, that we can meet these needs and meet these concerns and hopefully demythologize some of this. When it comes to water, it is easy to understand—I hesitate to use the word "hysteria", but there is apprehension, perhaps is a better word, that we can meet these concerns with the facts. And we thank you all for laying out the facts for us and appreciate you coming.

Mr. Chairman, I appreciate you coming to DeKalb County today. Thank you.

Mr. Nowak. We want to thank this panel, and also we have some additional witnesses with prepared statements. Unfortunately we have to move on to another great city, Tallahassee, in about an hour, so we will accept the rest of the statements from the list that was prepared by Mr. Jones, and we will again keep the record open as we look ahead. I am sure this is not the last word that we are going to have on this negotiation as it continues, and of course the allocation and reallocation of not only this corps project but many throughout our country. And hopefully, you know, you have an opportunity, everybody that testified, has an interest, an institutional interest, private interests that become very important in the whole mix. We live in a different, open type of society where our environmental concerns and our economic concerns at times seem to conflict, but I think we have all learned enough over the last ten years that unless we can bring those concerns together, we will create greater problems for all that are interested, and nobody's interests will move forward.

So hopefully we will have that kind of cooperation, and really we are looking at this situation as one of the first hearings outside of Washington on this particular subject, to perhaps—we did not know it would be in court when we scheduled this hearing. But now that it is, if this could move forward with all of these interests being served, perhaps we could develop here a model that we could use in the rest of the country where we anticipate other kinds of hearings almost exactly like this, looking at the navigation, looking at hydro interests, looking at the recreation, looking at flood control, looking at water supply. As these resources get scarce, of course all of these interests are going to come to the forefront, whether they be institutional or private and we will have to start making real options I am sure in the very near future to satisfy and really accommodate growth in the economy and hopefully protection of our environment.

Thank you very much, this meeting stands adjourned.

[Whereupon, at 1:21 p.m., the Subcommittee was adjourned.]

PREPARED STATEMENTS OF WITNESSES

TESTIMONY OF MR. JAMES M. BARKULOO, PROJECT LEADER, PANAMA CITY FIELD OFFICE, U.S. FISH AND WILDLIFE SERVICE, DEPARTMENT OF THE INTERIOR, BEFORE THE SUBCOMMITTEE ON WATER RESOURCES, COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION, REGARDING THE EFFECTS OF REALLOCATING WATER FROM LAKE SIDNEY LANIER ON WATER QUALITY DOWNSTREAM

September 28, 1990

Mr. Chairman, my name is James Barkuloo. I am the Project Leader of the Panama City, Florida, Field Office of the U.S. Fish and Wildlife Service (Service). My office is responsible for activities related to fish and wildlife resources throughout the Apalachicola-Chattahoochee-Flint (ACF) River Basin, and I appreciate the opportunity to discuss the proposed water reallocation from Lake Sidney Lanier.

I would like to address three main issues:

- the cumulative water quality impacts on fish and wildlife resources from the water reallocation,
- Service activities in evaluating the effects and possible measures to prevent any adverse impacts, and
- our Planning Aid Report recommendations.

Water Quality Impacts

The Mobile District of the U.S. Army Corps of Engineers has prepared the Lake Lanier Water Control Plan and Post-Authorization Change report. The data contained in this report suggests minimal impacts to fish and wildlife resources through implementation of the reallocation proposal. However, we believe that the cumulative effects on fish and wildlife resources cannot be adequately determined since the Corps report dealt only with Federal water reallocations. Examples of information needs include:

(1) the effects of water level and water quality changes throughout the basin on fish spawning, waterfowl, and wading bird habitats and populations;

(2) the effects of this proposal and the City of Atlanta's changed water use patterns on the quantity, quality, and timing of flow below Atlanta, as well as impacts on the Chattahoochee River and reservoirs; and

(3) the cumulative effects of the present proposal in conjunction with Atlanta's water use after 2010, present and future water use by other communities in the basin, and present and future groundwater withdrawals for irrigation.

Since the Post-Authorization Change report did not address comprehensive cumulative impacts, the report's finding of "minimal impacts" may be questionable. The Service therefore is concerned about the cumulative impacts that such a water allocation scenario would have on resources in the ACF basin.

Fish and Wildlife Service Activities

Service activities directly related to the water reallocation plan began in the early 1980's with coordination efforts on the Atlanta Metro Study. The current water allocation plan is a product of the original study.

The Service has not been a participant in the direct development of the reallocation plan and the Water Control Plan, but has prepared a Planning Aid Report on the proposal under the Fish and Wildlife Coordination Act. Our report discussed the fish and wildlife resources of the basin with emphasis on anadromous fish species. We also expressed a concern for the inadequacy of data on water quality, quantity, and timing of releases below Lake Lanier due to drainage water use and present and future development patterns.

Our report was submitted to the Mobile District of the Corps in December 1989. To date, the Service has not been contacted by the Corps regarding any additional activities planned for the ACF Basin.

Planning Aid Report Recommendations

As noted previously, the Service reviewed the available data and concluded that the proposed Lake Lanier Post Authorization Change report does not quantify current or cumulative impacts to fish and wildlife or their habitats.

Based on our involvement in planning for this project, the Service hopes that the following recommendations which were included in our Planning Aid Report will be considered in planning for water reallocation in the ACF System:

(1) Since the project may impact salinity levels in the Apalachicola estuary, it may be necessary to amend the project purpose to incorporate providing freshwater flows to the Apalachicola estuary in order to maintain seafood production.

(2) A basin-wide ACF water use plan and water budget should be developed to address future long-term needs.

(3) A tri-state compact capable of developing and implementing a basin-wide plan should be established.

(4) Since the potential cumulative impacts of this project have not been fully assessed, consideration should be given to supplemental NEPA assessments to assess direct and indirect effects on fish and wildlife resources as well as mitigation actions developed by the Corps of Engineers.

Mr. Chairman, the Service is concerned that the cumulative impacts from the proposed reallocation be assessed in order to avoid negative environmental impacts to the aquatic resources throughout this river basin system. We would therefore hope that these recommendations be considered.

Mr. Chairman, thank you for the opportunity to testify before the Subcommittee. I will be happy to respond to questions.

Tom Bartels

WRITTEN STATEMENT BY ROBERT W. CLAUSSEN
FOR THE RECORD
COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION
SUBCOMMITTEE ON WATER RESOURCES
FIELD HEARING
DECATUR, GEORGIA
SEPTEMBER 28, 1990

My name is Robert W. Claussen. I am General Manager of the Alabama Municipal Electric Authority ("AMEA"), a joint action agency consisting of eleven municipally owned electric utilities in the state of Alabama. Members of AMEA purchase all of their power needs from AMEA, except for the power purchased from the Southeastern Power Administration, the agency that markets preference power produced from the Georgia-Alabama system of projects, operated by the U.S. Army Corps of Engineers. AMEA's members have a vital interest in the Corps' operation of the Georgia-Alabama system projects, including those projects in the Apalachicola-Chattahoochee-Flint basin.

AMEA is a member of the Southeastern Federal Power Customers Group ("SFPCG"), which is an ad hoc association of rural cooperative and municipally owned electric systems located in the states of Alabama, Georgia, Mississippi, and North and South Carolina, which purchase SEPA power. These cooperatives and municipal systems serve over 8 million consumers in the region.

AMEA has not only an interest in the reallocation of Lake Sidney Lanier but a history of involvement in the proposed reallocation as well. AMEA was among the power customers who negotiated the proposed agreement for the reallocation. When the reallocation was initially proposed, we agreed not to oppose it, provided a legislative proposal would ensure that power customers receive fair compensation for replacement power costs and downstream interests could be satisfied. Thus, we worked along with other regional power customers, with the Georgia Department of Natural Resources ("DNR") and the Atlanta Regional Commission ("ARC"), to develop an equitable plan for the reallocation.

Specifically, the Southeast power customers developed a methodology for calculating the compensation due to power customers as a result of the reallocation. After extended negotiation, the parties agreed upon a lump sum payment as fair compensation to hydropower generation. The payment was intended to represent the total replacement power costs arising from the reallocation, over the life of the project. Power customers agreed to the lump sum settlement of the reallocation based on the assurance, from the DNR and ARC, that adverse downstream effects would be mitigated. This agreement was incorporated into draft legislative language which to date has not been introduced.

As the power customers and water supply interests were coming to an agreement, interests in Alabama, Florida, and southern Georgia began to voice concerns over the potential downstream impacts of the reallocation. We have continued to attempt to play a constructive role in resolving the issue of impacts downstream.

If we consider the basis on which federal water resources projects, such as Buford Dam, were constructed, it becomes obvious that the settlement developed by power customers and municipal water users is fair and equitable, and in fact provides a model for transferring project benefits from authorized project purposes to new users. Federal water resources projects have been authorized by Congress based on the Corps' studies of costs and benefits, upon finding that the benefits of particular project purposes exceeded project costs. The Corps constructed the projects, and allocated costs to project purposes, typically flood control, navigation and power generation, based upon authorized and anticipated use. In the use of hydropower, customers promised to purchase the power output and to repay costs allocated to power in return for long-term access to this capacity and energy source. In numerous cases, power customers are the only project beneficiaries who pay for project investment.

In light of the specific project purposes Congress considered in authorizing construction of these projects, if benefits are diverted from a project's stated purposes, then those purposes should be fairly compensated. In the case of Lake Lanier, we, as hydropower customers, do not want to stand in the way of needed water supply for the residents of metro Atlanta; however, we do assert that any reallocation of water storage should be accompanied by a reallocation of costs and appropriate compensation.

The reasonable resolution which power customers and municipal water users have negotiated with respect to Lake Lanier stands in sharp contrast to the unprincipled position which the Corps of Engineers has struck with respect to recreational usage of federal projects in the southeast. In the past several years, particularly in light of the drought, the Corps has altered project management to accommodate recreation, which is not an authorized purpose of the projects. The Corps' decisional process has ignored congressional project authorizations; the federal government's contractual obligations; and impacts on downstream users, who have relied upon historical levels of releases to meet downstream water supply, water quality and recreation needs.

The Corps' management in the southeast is symptomatic of a national problem: in too many cases, the Corps has substituted its judgment for that of the Congress in establishing water use priorities. And the Corps has ignored the economic basis on which projects have been built and costs repaid.

AMEA believes that legislation needs to be developed to achieve a fair balancing of these competing uses and ensures that all Corps decisions, with respect to operations at federal projects, are made with public involvement; economic analysis; a matching of costs with benefits; and attention to congressional authorization. We appreciate the support which you have shown for our efforts.

Respectfully submitted,

Robert W Claussen

Robert W. Claussen, General
Manager
Alabama Municipal Electric
Authority

[statemen.11a]

NORTH FULTON
CHAMBER OF COMMERCE

September 28, 1990

STATEMENT OF THE NORTH FULTON CHAMBER OF COMMERCE FOR NORTH FULTON COUNTY

TO: Public Works and Transportation Committee

FROM: Joy H. Bauer, Executive Director
North Fulton Chamber of Commerce

RE: Regional Economic Growth Issues and Infrastructure
Water Needs of the Fourth District, Metro Atlanta and Georgia

The future of the Fourth District, Metro Atlanta and the State of Georgia rests on the availability of water, short term, mid-term and long term. Water in Georgia is no longer just an economic development or growth issue, it is our future!

We must recognize that water is a limited resource and there are competing interests. People in this area have concern on the water level at Lake Lanier impacting their lake front properties but our water needs come down to the availability of drinking water and the economic welfare of the region.

The planning process is only now getting up to speed. We can't change our past sins but we are here today and can ensure our future with comprehensive planning. This planning process needs to address density:

a. Can we get water?

b. Can we dispose of sewerage?

High density areas need to be serviceable and not density planned in areas that can't be serviced.

[illegible] OLD ROSWELL ROAD • ROSWELL GEORGIA [illegible] • TELEPHONE [illegible] • FAX [illegible]

Regionalism is an important tool for our future. The Governor's Growth Strategies' results clearly point out what we must do to go forward. Our statewide water needs are interrelated and regional. We must prioritize the needs of many rather than the needs of only a few (i.e. levels of Lake Lanier impacting a few while the survival of the Atlanta metro region is vast). Lake Lanier can only service our needs until 2010 and the proposed regional reservoirs are tied up in the federal wetlands issue. Wetlands are no longer just the developer's concern but must be looked at for the impact on the common good of the people.

The tools for solving our long term water needs are at hand. Decisions cannot be made in a vacuum for political needs versus real needs. There is not one solution but many. The re-reg dam, approved by Congress, provides a net gain of wetlands; the reservoirs laid out by the Governor's Growth Strategies Commission are critical; and we must reinforce conservation measures. Water is our future, our lifeblood. Working together through public/private partnerships, regional cooperation and your leadership we can ensure the future of this region.

DEKALB
CHAMBER OF COMMERCE

TESTIMONY OF

J. DAVID CHESNUT
CHAIRMAN OF THE BOARD
DEKALB CHAMBER OF COMMERCE

BEFORE THE
COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION
U.S. HOUSE OF REPRESENTATIVES

SEPTEMBER 28, 1990

Mr. Chairman and members of the Committee, my name is David Chesnut, and I am here representing the DeKalb Chamber of Commerce. We appreciate this opportunity to talk with you about an issue that is critical to the economic health of our region. Congressman Ben Jones has provided effective leadership in his work on the Water Resources Subcommittee, and we thank him for his vision and his hard work.

The Atlanta region must have adequate water, both in terms of quantity as well as quality. The Atlanta Regional Commission has estimated that if more water is not made available, there will be almost one million less people and over half a million less jobs in Georgia in the year 2010 than under ARC's current projections. Less people and less jobs translate into large losses in wages earned within the state and in gross revenue collected by the State of Georgia. ARC estimates $127 billion less in wages and a lost gross revenue to the State of Georgia of $8.2 billion (1986 dollars) between 1995 and 2010. More than 85 percent of this loss would occur in the Atlanta area.

Supply is not the problem. The Atlanta region gets an average of over 40 inches of water each year. The issue is effective management of our water.

First, we should maximize the use of the area's existing reservoir by reallocating the use of water from Lake Lanier from primarily power generation to water supply. This is the alternative recommended by the Atlanta Regional Commission. The Army Corps of Engineers' Post Authorization Change (PAC) study found that implementing reallocation would change flow rates downstream only minimally from what they are today.

Second, as a long-term solution to Atlanta's water needs, we must support efforts to establish a regional reservoir system. Work must begin now to allow for the construction and implementation of the system which will serve the region's water supply needs after the turn of the century.

Third, we must intensify efforts to promote water conservation as the means to more wisely use our water resources. Many local governments in the Atlanta region have many programs designed to reduce water demand. These programs must be better coordinated and strengthened to be more effective and efficient.

Assuring an adequate supply of water is not enough. We must also assure that the quality of the water is maintained for use in homes and businesses, in recreational areas for fishing and swimming, and in the wetlands and recharge areas. Our Chamber has worked along with other chambers, governments and other organizations to help assure safe, clean water through region-wide partnerships.

In summary, we must take care of the water we have, and protect it from deterioration. We must use water wisely and not waste it. We in the Atlanta region can make many improvements, and I am confident that we will.

But we cannot provide for our future water needs alone. We need your help.

Without Congressional authorization, the reallocation of Lake Lanier will not happen. And without an adequate supply of water the economic health of the Atlanta region, and to a lesser degree Georgia and the Southeast, is at risk.

Thank you.

SANDY SPRINGS
SSCC
CHAMBER OF COMMERCE

SANDY SPRINGS
CHAMBER OF COMMERCE
5784 Lake Forrest Dr.
Suite 155
Sandy Springs, Georgia 30328
404/847-9583

Linda V. Gillman

Testimony of the Sandy Springs Chamber of Commerce
before the
Congressional Subcommittee on Water Resources
Friday, September 28, 1990
Manuel Maloof Center
1300 Commerce Drive, Decatur, GA

Honorable Subcommittee Chairman,
Members of the Subcommittee,
Ladies & Gentlemen:

Thank you for the opportunity to come before you this morning to share the concerns of the citizens and business leaders of Sandy Springs. The Sandy Springs Chamber represents a rapidly growing suburban community with a current population of 73,832 citizens and over 11,000 business firms.

Sandy Springs is a upscale community of schools, churches, shopping malls, residential and commercial areas. We are located between the City of Atlanta and the City of Roswell and have a documented history which dates back to 1821.

Sandy Springs has the unique distinction of being located at the very heart of the growth pattern of metropolitan Atlanta. Sandy Springs has 18 million square feet of Class A & Class B commercial office space, with permit requests pending for another 69 million square feet. As you can see, Sandy Springs could well become known as the second downtown of Atlanta.

Many factors have played a part in the economic prosperity and redistribution of population to the southeast, not the least of which has been adequate water resources --- a major component of the excellent quality of life enjoyed by this region.

The Atlanta region is blessed with an excellent quality of life, good climate, abundant jobs and an available work force. Atlanta is an international city and has the distinction of being one of the major transportation hubs in the world. Atlanta --- the host city for the 1996 Summer Olympics --- is truly a world class city.

The population of the Atlanta SMA is projected to grow to 4.5 million by the year 2010. The limitation or loss of economic prosperity to the Atlanta region due to lack of water would be devastating to the entire southeast United States.

According to the Atlanta Regional Commission (ARC), the eight county Atlanta regional forecast for jobs in 1989 was 1,349,000. The 1990 forecast is 1,457,000. The ARC translates these jobs into an average household income of $38,729 in the eight county Atlanta region. Sandy Springs is a uniquely prosperous community with a current average household income of $71,832.

The ARC has projected the creation of 525,000 new jobs in the eight county Atlanta region during the 1990's. Suppose for a moment that lack of water caused the loss of twenty percent (20%) of these jobs ... taking into consideration the average household income ... there would be an annual loss of over $9,000,000 a year in salaries. The loss of buying power attributable to these salaries would have such a staggering economic impact on the Atlanta region and entire southeast, the Chamber has been unable to find a single "expert" who would even attempt to extract loss figures for inclusion in this testimony.

The Atlanta region's streams are generally small, except for the Chattahoochee River. Groundwater is limited since the region rests on crystalline rock. The Atlanta region is dependent on the Chattahoochee/Lake Lanier system for about 80% of its water.

It is our understanding that conservation measures are a significant component of the water resource planning, as is demand management. We are further aware of the environmental impact of building reregulation damns and the considerations which surround them.

We also understand that the reallocation of Lake Lanier has repercussions both upstream and downstream and will require authorization by Congress.

The ARC has stated to us that they consider reallocation will be a significant part of the permanent solution for the Atlanta region's water supply. We rely on the detailed research and good judgement of the ARC and wish to defer to their testimony in this regard.

Again, this is a very important issue to us --- one with a very real economic impact. We appreciate this opportunity to share our thoughts and concerns with you and thank you for your time this morning.

Respectfully submitted by:

Linda V. Gillman, CAE

Linda V. Gillman, CAE
Executive Director
Sandy Springs Chamber of Commerce

G. Stanley Hill

WRITTEN TESTIMONY OF OGLETHORPE POWER CORPORATION

P.O. BOX 1349
TUCKER, GEORGIA 30085
FOR

THE SUBCOMMITTEE ON WATER RESOURCES
COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION
FIELD HEARING ON LONG-TERM WATER SUPPLY NEEDS OF THE ATLANTA REGION FROM THE APALACHICOLA-CHATTAHOOCHEE-FLINT RIVER BASIN AND THE OPERATION OF BUFORD DAM AND LAKE SIDNEY LANIER IN MEETING THOSE NEEDS
FRIDAY, SEPTEMBER 28, 1990
DECATUR, GEORGIA

STATEMENT BY OGLETHORPE POWER CORPORATION

POST OFFICE BOX 1349
TUCKER, GEORGIA 30085

COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION
SUBCOMMITTEE ON WATER RESOURCES
FIELD HEARING
DECATUR, GEORGIA
SEPTEMBER 28, 1990

My name is G. Stanley Hill. I am a Senior Vice President at Oglethorpe Power Corporation, headquartered in Tucker, Georgia. Oglethorpe is a generation and transmission cooperative providing power to 39 of Georgia's 42 consumer-owned Electric Membership Corporations. The 39 Member Systems serve more than 2 million Georgians in 71 percent of the state's land area. In addition to the power that our member systems purchase from Oglethorpe, they also obtain power from the Southeastern Power Administration, the agency that markets public power produced from the Georgia-Alabama system of Corps of Engineers projects. The Apalachicola-Chattahoochee-Flint basin is part of that system. Power from the Georgia-Alabama system is vitally important in our efforts to maintain reasonable rates for our consumers.

Oglethorpe strongly supports the pending proposal to reallocate the water resources of Lake Lanier. We at Oglethorpe Power realize the need for new water supply in the Atlanta area and understand that the only reasonable major source of water for that new supply is Lake Lanier. We participated with the Department of Natural Resources and the Atlanta Regional Commission in the initial negotiations to reallocate Lake Lanier for water supply, and were pleased with the agreement that was reached to compensate power customers for the benefits that will be lost as a result of the reallocation.

Hydropower is one of the purposes for which Congress authorized Lake Lanier, basing the decision to build the project on an economic cost-benefit analysis. Hydropower consumers have financially supported the Lake Lanier project from its beginning. Losing the valuable power generated at Lake Lanier would cause economic hardship to these consumers. The Atlanta Regional Commission recognized our needs and agreed to provide compensation for replacement power costs. Oglethorpe Power believes that the settlement of the reallocation issue between the hydropower users and the water users presents a model for resolution of competing demands for water.

Understanding that new water supply is of vital importance to the Atlanta region, hydropower users feel that a fair and equitable process has been used in addressing the situation. We commend Congressman Jones for his role in this effort. Oglethorpe Power hopes to continue to work with Mr. Jones and the subcommittee to reach an ultimate resolution in the best interests of the state of Georgia and the region as a whole.

Respectfully submitted,

G. Stanley Hill

G. Stanley Hill, Senior Vice President
Oglethorpe Power Corporation

Statement of
Mayor Maynard Jackson
City of Atlanta
before the
House Subcommittee on Water Resources
at
the Hearings on the Long-Term Water Supply Needs
of
The Atlanta Metropolitan Area
September 28, 1990

Mr. Chairman and members of the Subcommittee, I am Maynard Jackson, Mayor of the City of Atlanta. I am pleased to welcome you to Georgia and to Atlanta and I am especially pleased to have the opportunity to present testimony to you today on the vital issue of a long-term water supply for our state and local communities. We recognize the need for a comprehensive and cooperative effort by federal, state and local governments to insure that the goals of an abundant and clean water supply for all citizens and we in Atlanta are committed to do our part to make the goal a reality.

Mr. Chairman, in my remarks today I will focus on two principal areas; water supply and water quality and will ask that you consider these comments as you address legislation which will affect this and other areas of this country.

WATER SUPPLY

Water is a resource that is essential to the health and welfare of all citizens in Georgia and to the continued growth and prosperity of every community. We are all obligated to use this resource wisely and carefully to insure that the use of water by one community does not adversely affect another.

The metropolitan Atlanta area has benefitted for many years from the planning, foresight and cooperation between local, state and federal government which led to the construction of Buford Dam and the formation of Lake Lanier. This project provided for flood control, power generation, a dependable supply of water from the Chattahoochee river for the metropolitan area, and downstream navigation. Other projects, such as Lake Altoona have provided similar benefits.

Although Atlanta's population is approximately 500,000, the City provides water and wastewater treatment services to more than a million citizens in the metropolitan area. As the Atlanta area has grown, the demands for water have increased and the there is a need for a commitment for a cooperative effort between state, federal and local governments to insure that our water resource is properly managed and developed to meet these needs while insuring that adequate protection is provided for all upstream and downstream uses.

Studies have been conducted to evaluate alternatives to meet future water supply needs, and it is currently proposed to modify operation of the Buford Dam through Congressional re-authorization so that the primary purposes of the dam and reservoir project will be for recreation, flood control and water supply. This proposed re-authorization has been made in recognition of the shift in the priority of needs for the citizens of Georgia and if approved, it would permit the U. S. Army Corps of Engineers to operate the project in such a way as to meet the needs for recreation and flood control and to meet the projected water supply needs for the metropolitan Atlanta area through 2010. The numerous studies that have been conducted also show that the proposed changes in operation will not adversely impact the low flow conditions in the Chattahoochee River which are essential to protect water quality and downstream uses.

Because of our desire to plan for the long term water resource needs for the area and because of the time required to evaluate and implement programs, we must look beyond 2010 to insure that future generations will continue to have an adequate and safe supply of water. It is doubtful that Lake Lanier and Lake Altoona alone can meet the long term water supply needs of the area even with changes in the operation of these facilities. There is no one single answer to the long term water supply requirements, rather a combination of systems and sources of water must be considered and developed. It is, therefore, essential that all levels of government continue to work together to identify and implement programs to develop other sources of water for this and other areas of the state.

Other sources of water supply have been identified and are either currently being evaluated or will be studied over the next several years. These alternatives include the following:

- Regional Reservoirs: The state of Georgia enacted legislation to authorize the Department of Natural Resources to develop a system of regional reservoirs that would increase the availability of water for communities in the northern part of the state. Development of this program is currently being hampered by EPA and Corps of Engineers interpretations of federal legislation governing development of areas designated as wetlands. This program is a key element to the state's strategy for providing a dependable supply of water for greater metropolitan Atlanta counties and to relieve the demands on current sources in the metropolitan area

Water Reclamation: The new requirements for wastewater treatment that have been imposed by the Georgia Environmental Protection Division and the U. S. EPA, including limits for the discharge of Phosphorus, will require area governments to construct additional treatment facilities that will produce a very high quality effluent. This high quality or reclaimed water could be used to meet many of the demands for water such as golf course and lawn irrigation. To use this type of water, it would be necessary to construct a separate water distribution system, however, this approach has been successfully developed in other areas of the country and it will be fully evaluated as an alternative future source of water to partially meet the needs of the area. The federal government could play a vital role in this effort, on a national basis, by encouraging the use of reclaimed water through support of research programs and by developing a sound program for public education.

Lake Hartwell: Diversion of water from Lake Hartwell, which feeds the Savannah River in the northeast area of the state to either Lake Lanier or directly to the Atlanta area via dedicated pipeline could provide an additional supply of water to meet future needs. This alternative would have to be evaluated to determine the impact on the Savannah River, the operation of the Hartwell Reservoir project and the cities and counties that are dependent thereon.

Chattahoochee River Below Atlanta: The flow in the river below the Atlanta area is substantially higher than it is above where water supplies are currently obtained. The higher flows are due to the increased water shed areas that flows into the river downstream from the metropolitan area. The improvements in water pollution control systems that have been made and that will be made during the next ten years could make this a viable source of additional water for the area. Essentially all water that would be withdrawn would be returned either directly as treated wastewater or indirectly where it was used for irrigation, therefore, there would be no measurable impact on downstream uses.

Water Conservation: As the demands for water increase, it becomes increasingly important to educate our customers as to the need to conserve water and to use it when it is available. The area governments are recognizing the importance of providing information to the public and to require water saving devices and appliances where feasible.

Desalinization: The possibility of constructing a desalinization plant in a coastal city and piping the water to the Atlanta area has been investigated.

The cost of constructing such a facility and the transmission system to provide the water to this area was estimated at approximately one billion dollars and the cost operation was estimated at approximately one hundred million dollars per year. This cost is more than four times the cost of other alternatives for water supply, therefore, it will not receive further evaluation.

Ground Water: Evaluation of the cost/benefit and availability of ground water supplies and ground water recharge as a means of augmenting surface water supplies.

River Basin Management: Evaluation of the policies and procedures followed by the Corps of Engineers in managing reservoir projects to maximize the use of stored water for power generation and non-power purposes, including a review of policies and regulations governing the inter-basin transfer of water to allow sharing of resources with areas with water supply needs. Water supply withdrawals are currently limited at all times to insure that required low flow levels are met, however, evaluations should be made to determine the impact of allowing higher withdrawals during higher river flow periods, which could be stored by the water utilities to meet supply needs at other times. Mandated off system storage could provide consistent supplies during low flow river conditions or periods of high demand in excess of withdrawal permits.

WATER QUALITY

Over the past twenty years, Atlanta, which provides wastewater treatment for portions of Fulton, Dekalb and Gwinnett Counties, has spent more than $300 million dollars to construct additions and improvements to its water pollution control plants to meet state and federal standards. These improvements were funded in part through funding from the EPA construction grants program. Atlanta's treatment facilities have provided secondary treatment for more than sixteen years at all of its facilities and the treated discharges are in compliance with the federal NPDES Permits. Water quality in the Chattahoochee River has dramatically improved during this period due to the programs implemented by Atlanta and the other metropolitan communities even though there have been large increases in the population in the area. The South River which originates in Atlanta and flows in a southeasterly direction into Jackson Lake, has been cleaned up because of treatment plant improvements and Combined Sewer Overflow regulation and treatment projects that have been constructed by Atlanta, and the South River is once again being used for fishing, trapping and recreation.

State and federal regulations and requirements continue to change, however, and these changes are taking place at such a rapid pace that there has not been adequate consideration of the impacts on affected communities and the overall benefits to be derived. For example, criteria that are used to set standards for daily discharges from water pollution control plants during low flow conditions in the receiving streams are being applied to combined sewer overflows and storm water runoff which occur intermittently during periods of rainfall. In addition, it appears that proper consideration is not being given to the impacts of storm water runoff and non-point discharges on water quality when limits are applied to point source discharges. The result of this omission may well be to find that communities will spend millions of dollars to modify treatment facilities only to find that overall water quality objectives cannot be met in some areas because the cost will far exceed the financial capability of our citizens. This does not mean that a very high level of water quality will not be provided and maintained below the urban areas in Georgia. We must, however, be realistic in establishing uses for all of the streams in the state so that our communities will have the resources to meet the many demands that are placed on them to adequately serve, protect and educate their citizens.

In closing, we request that the Subcommittee assist the State of Georgia and the Atlanta Region to provide an adequate long-term water supply by supporting the following:

- Approval of legislation to reauthorize operation of Buford Dam to include storage for drinking water supply as an authorized use.
- Authorize the short and long term reallocation of storage in Lake Lanier and Lake Altoona.
- Review of the policies that have been adopted by the EPA and the Corps of Engineers in implementing the requirements of federal legislation governing the protection of wet lands.
- Authorize state and federal government to locate a major water storage

facility to meet the regional water supply needs beyond 2010.

- Encourage the development of federal legislation and EPA regulations to establish comprehensive and consistent policies and approaches for water quality standards for all sources of water pollution.

I want to thank you for holding this hearing in Atlanta and want to assure you that the City of Atlanta is committed to taking the steps necessary to manage the quality and quantity of Georgia's water resource to best address the needs of its citizens and the environment.

Testimony Of:

G. ROBERT KERR

Before The

Committee On
PUBLIC WORKS AND TRANSPORTATION

September 28, 1990

Mr. Chairman, the able congressman from the 4th district - Rep. Ben Jones, and members of the committee, I am pleased to be able to appear before you and offer my thoughts on the water supply needs of the Atlanta region and Georgia.

For eleven years, I was executive director of The Georgia Conservancy, Inc. (TGC). I recently resigned from TGC and have just entered the consultant ranks, specializing in environmental conflict resolution.

Mr. Jones, I compliment you on behalf of all concerned Georgians for conducting these hearings. Only through open and frank discussion are we going to be able to achieve the level of consensus necessary to a resolution of this significant issue.

THE PROBLEM:

According to some reports, experts once predicted Atlanta would become one of the largest cities in the world. There did not appear to be any physical limitations which would prevent that achievement. The one element necessary to support that prediction which is not now in abundant supply is water. While I do not personally want Atlanta to become a megalopolis, I do believe it will continue rapid growth well into the next century. And we must develop reasonable water supply sources and combine them with strong conservation programs.

The northern portion of the state enjoys a high average annual rainfall - from 50 inches to over 80 inches in the extreme northeastern corner. However, there are no major rivers flowing through the state. The mountain ranges which divide the northern part of the state also assure that the streams of north Georgia originate along the sides of these mountain ranges. Therefore, the rivers which serve north Georgia are relatively small streams. The Chattahoochee River, which provides potable water for over eighty-five percent of metro Atlanta's population, only drains a watershed of 1,400 sq. miles north of Buford Dam (the state is over 57,000 sq. miles in size).

Evidence suggests that the city fathers who championed the construction of Buford Dam understood the limitations of the Chattahoochee River relative to future growth. And while public policy did not support public funding of reservoir development for water supply purposes, they intended Lake Lanier to augment water supply, particularly in low-flow seasons. Their expectations have been realized until this time.

Region leaders soon realized that they must meet the prospects of rapid growth with a reliable water supply source(s). The Metropolitan Atlanta Area Water Resources Study (MAAWRS) was begun in 1972. Initially, the preferred solution offered by the U.S. Army Corps of Engineers (COE) was to construct a reregulation dam 6.3 miles downstream of Buford Dam on the Chattahoochee River.

This preferred solution was opposed by many conservationists on environmental grounds and (perceived) faulty costs/benefits analysis. As you know, COE shelved that proposal during the Post Authorization Change Analysis (PAC) in favor of reallocating a portion of the storage used to support peak hydropower production to support water supply needs. This proposal had been supported by many conservationists as the most environmentally and cost effective solution.

As you also know, Alabama, Florida and many political entities, groups and individuals both upstream (Lake Lanier) and downstream of Atlanta have registered opposition to approval and implementation of this plan. Alabama has filed suit to prevent COE from entering into contracts with certain Georgia local governments for additional water withdrawals from waters of Georgia. These include the cities of Cartersville and Chattsworth, the Cobb/Marietta Water Authority, and the Atlanta Regional Commission (ARC). The Chattahoochee River, the Etowah River, Carters Lake, Lake Allatoona and Lake Lanier are the bodies of water which the legal action addresses. As we speak, discussions and negotiations are ongoing in an attempt to resolve this dispute. Florida, Georgia, the above mentioned cities and political entities, and several organizations are seeking or will seek to become parties to the suit.

At the heart of the dispute is economic development. Each entity believes that curtailment of a quality water supply will have adverse economic impacts as well as potential environmental impacts. Water supply, water quality, recreation on and in the water, wildlife (fisheries) management, scenic, navigation, flood control, wetlands protection, residential and commercial property values are all represented in the debate.

It is important to note even if this dispute is resolved in favor of additional withdrawals in Georgia and, if Congress eventually decides in favor of authorizing reallocation of Lake Lanier, these actions will assure metro Atlanta area water supply needs will be met only through approximately the year 2010.

SOLUTIONS:

Reallocation will be less environmentally damaging in the immediate downstream vicinity than would be caused by the reregulation dam (which received conditional approval by Congress.) The more distant downstream effects will be minimally different. A new

Environmental Impact Statement (EIS) should not be necessary before Congressional consideration of reallocation authorization.

Alabama Congressman Tom Bevill has initiated interest in a Comprehensive Study for the Coosa and Apalachicola-Chattahoochee-Flint River Basins. The proposed four year, four million dollar study should receive first year funding in the current appropriation budget package. As part of the conditions for funding of that study, Mr. Bevill should urge, and Alabama and Florida should agree to withdraw their opposition to the proposed interim (short term) water withdrawal contracts for the above mentioned cities and political entities. An agreement in principle between these states acknowledges availability of water for these purposes. The development of long term agreements could become a purpose of the study. A negotiating team should be created of appointees of each governor to review and develop agreement on the scope of the proposed study. The existing MAAWRS data should be incorporated into the proposed study.

As this study proceeds, it is very important that a forum be provided where the publics representing all of the above interests can be heard and responded to; where conflict resolution is a significant part of the agenda; and where accurate information is provided.

Section 17 of the water projects legislation as passed by the House PW&T Committee and Section 308 as passed by the Senate require serious review. Particularly troubling is Section 308 (2) (F) which appears to allow the administrators of power marketing agencies (i.e. Southeastern Power Administration) unlimited discretion in establishing the value of hydropower benefits lost to other approved reimbursable project purposes. Should this have been the case when the repayment of lost benefits was discussed as part of the proposed reallocation of Lake Lanier, the repayment costs could easily have been twice what was eventually agreed to. Furthermore, the needs of communities served by the project change and some latitude must be given the administering agency in determining allotment of storage to multiple and, sometimes competing purposes. As written, these sections appear to limit that flexibility. These sections appear to be designed to constrain fair consideration of other potential project purposes.

Conservation of our water resources must become both a priority and a requirement. Congress is urged to deal quickly and effectively with legislation to establish plumbing and appliance water use standards. Congress is also urged to incorporate incentives into the legislation for states that have adopted tough conservation programs.

Georgia has begun a program to construct a series of water supply reservoirs designed to serve regions of north Georgia. A yet to be determined number of these reservoirs, properly sited and managed, will be extremely important role to the long term economic and environmental health of the state. Implementation of this program should proceed while there is time to plan and implement the reservoirs properly. Wetlands losses and mitigation and water quality are valid issues of concern. They should be addressed in an EIS for the reservoir program as well as an EIS or EA (environmental analysis) as appropriate for each reservoir.

Water quality is of concern where effluent released into Georgia waters from neighboring state's permitted dischargers is legally of poorer quality than that released by Georgia dischargers. Congress should ask U.S. EPA to carefully review these situations and develop regulations which require compliance with standards set by the state with the more stringent standards. Congress should also review the national CSO (combined stormwater and sewer overflows) problem and determine if federal funding is appropriate to address the issue.

Georgia has moved forward with efforts to address both problems. Georgia has: conducted extensive studies on both groundwater and surface water availability; water withdrawal permitting programs; stringent water quality standards (except for dioxin); limitations on effluent releases; and in the most recent session of the Georgia General Assembly, passed legislation to require a ban on high phosphate content detergents, require permitting and clean-up of CSOs, seven of which are dumping raw sewage into parks and neighborhoods throughout the city, initiate studies to establish water quality standards for lake waters (if funded), and set water saving plumbing devices standards.

There is, and will continue to be, extensive debate over how to achieve a reliable source of reasonably priced water for the metro Atlanta area and north Georgia. A reasonably priced mix of solutions, including our highest priority of water conservation, must be found. The disadvantaged will be hurt the most seriously from both an economic opportunity and health standpoint if the metro Atlanta area suffers unreasonable water supply constraints.

Mr. Chairman, we appreciate the opportunity to share our thoughts with this very important committee. If we can be of further service, we would be honored to respond.

September 28, 1990
Testimony before the U.S. House of Representatives'
Subcommittee on Water Resources
of the
Committee on Public Works and Transportation

Manuel Maloof
CEO DeKalb County, Georgia
and
Vice Chairperson, Atlanta Regional Commission

What Is Reallocation

Reallocation is a proposal to change or "reallocate" a portion (20 percent) of the water storage in Lake Lanier that is currently reserved for hydropower generation - and earmark it for water supply. Reallocation of Lake Lanier was recommended by the Corps of Engineers in 1989 as the best method to provide for the current and future water supply needs of both the Lake Lanier communities and the Atlanta Region through the year 2010. This alternative would meet this area's water needs in the most cost-effective and environmentally sound manner, and would not significantly impact other users of the river system.

Reallocation will primarily change the timing of releases of water from Lake Lanier. Large surges of water are currently released to produce hydroelectricity a few hours a day on weekdays and very little is released at other times and on weekends when water supply demands are high. Reallocation will smooth out the release pattern from Buford Dam by reducing peak hydropower releases and increasing off-peak releases. In addition, reallocation will provide for withdrawals directly from the Lake for surrounding lake communities.

Water Resources Background

The Atlanta Region obtains most of its water from a river system which is a valuable resource to many people. The headwaters of the Chattahoochee River begin above Helen in the north Georgia mountains. As the river flows south it is impounded by Buford Dam to create Lake Lanier, flows through the Atlanta Region and runs along the Alabama border. Many people are not aware that the border between the states of Georgia and Alabama lies on the Alabama side of the Chattahoochee rather than down the center of the river. The Chattahoochee then meets the Flint River north of the Florida line, where the two rivers merge to form the Apalachicola River. The Apalachicola flows through the Florida panhandle to the Gulf of Mexico.

Along the river system are five federal dams and 11 private dams. The land that drains into these rivers or their tributaries is called the watershed or river basin. The Apalachicola-Chattahoochee-Flint (A-C-F) River Basin covers 19,800 square miles of which 14,500 (73.23%) are in Georgia, 2,800 (14.14%) are in Alabama, and 2,500 (12.63%) sq. mi. are in Florida. The amount of water that flows into the rivers depends on rainfall and the land area that catches the rainfall. In the A-C-F River Basin, most of the water in the rivers originates in the State of Georgia.

The Atlanta Region's streams are generally small-except for the Chattahoochee River - because of its location on a sub-continental divide. Groundwater is also limited since the Region rests on crystalline rock such as Stone Mountain granite. The Chattahoochee/Lake Lanier system is the only major source of water available to the Atlanta area and the Region is dependent on it for about 80 percent of its water supply.

How Much Water is in the Apalachicola-Chattahoochee-Flint River System

On the average about 1,300 million gallons per day (MGD) flow in the Chattahoochee River just below Lake Lanier. Even after the Atlanta Region's use, the average flow 40 miles down river at Whitesburg, Georgia nearly doubles to 2,500 MGD. Moving on downstream, the river continues to grow and at Columbus the average flow is 4,300 MGD. By the time the river flows by Columbia, Alabama, its size is four times that at Atlanta. Just after the Chattahoochee River meets the Flint at the Florida line, the average flow is about 14,000 MGD. About 45 percent of this flow is from the Flint River. When the combined Chattahoochee and Flint rivers finally empty into the Gulf of Mexico as the Apalachicola River, the flow has grown to more than twelve times what it was just below Lake Lanier for an average of 16,680 MGD.

During low flow periods these flows can be substantially less. For example, in the drought of 1988 annual flows in the River were 50 percent less at Atlanta, 45 percent less at Columbus, and 29 percent less just before the Apalachicola emptied into the Gulf.

Reallocation History

The Atlanta Region would have stopped growing years ago had it not been for the vision of leaders like Mayor Hartsfield of Atlanta and Senator Richard Russell who planned and then achieved the construction of Buford Dam and Lake Lanier. The Buford Dam/Lake Lanier project is a federal Corps of Engineers project which releases water into the Chattahoochee River. It was authorized by Congress in 1947 and built between 1950-1957 for navigation, hydropower, flood control, and water supply/water quality for Atlanta. Since then, recreation has become a major use of the project.

The original authorization documentation for Buford Dam clearly indicates that water supply and water quality for the Atlanta Region was a purpose of the project. Further, documentation shows that increased offpeak releases for future Atlanta Region water withdrawals was fully intended for the project. We now need and are ready to fully realize the vision of our former leaders.

Our efforts have a long history. In 1972, Congress authorized the Metropolitan Atlanta Water Resources Management Study (MAWRS) to develop a long-range water supply management plan. The study verified that, indeed, the Lake Lanier/Chattahoochee River was the only reasonable major source of water for the Atlanta Region and studied many alternatives for its management.

Since off-peak flows in the Chattahoochee River were already becoming inadequate, the first outcome of MAWRS was to set up temporary arrangements to increase off-peak releases (those other than hydropower) from Lake Lanier while a permanent solution to provide for the Atlanta Region's water needs was studied. Temporary arrangements were first put in place in 1975.

The most recent temporary contracts expired in 1989 and another temporary agreement to supply the metro Atlanta area with its current water needs has been prepared by the Corps. Reallocation will be a significant part of the permanent solution for the Atlanta Region's water supply.

In 1981, the MAWRS study recommended that a reregulation dam be built below Buford Dam, provided that water quality and other environmental concerns could be addressed. The reregulation dam was a small dam on the Chattahoochee River below Lake Lanier designed to capture weekday hydropower surges from Buford Dam and re-release them at other times in a manner more suited to water supply use. The reregulation dam was authorized in the Federal Water Resources Act of 1986 with conditions that environmental concerns and economic issues be evaluated in more detail prior to construction approval. Strong environmental opposition to the reregulation dam existed.

Subsequently, more detailed economic and environmental studies by the Corps of Engineers during 1984-1988 resulted in the reversal of the 1981 recommendation. The Corps' 1988 recommendation is to change or reallocate 20 percent of the water stored in Lake Lanier from hydropower use to water supply use. The reallocation plan will meet the water supply needs of the Atlanta Region and other Lake Lanier users to the year 2010.

Need for the Reallocation of Lake Lanier

It is important that the reallocation of Lake Lanier take place soon. We need a permanent solution in place so the the Atlanta Region can be assured that its investments in the future are secure.

The Atlanta Regional Commission forecasts continued, healthy growth for the Atlanta Region through the year 2010. From a current population of over 2.4 million, the Region is expected to be home to more than 3.7 million people in the year 2010. Jobs are forecasted to grow from about 1.4 million today to over 2.3 million over the next 20 years.

The ARC Regional Water Supply Plan forecasts that even with a strong water conservation element, that in the year 2010 an average of 580 MGD of water will be needed to serve our Region and that 83 percent of this water will need to come from the Chattahoochee River/ Lake Lanier system. It is clear that without a secure, long-term water supply plan such as reallocation of Lake Lanier, that the Region's future growth potential will not be realized.

The Region, the State, the Southeast, and with the Olympic decision last week - the entire country - has much to loose without an assured supply of water for Atlanta. If a permanent solution through reallocation is not put in place, growth will be curtained. This would impact the entire State of Georgia which stands to lose 680,000 jobs, $127 billion in wages, and $8.2 billion in State revenues between now and the year 2010.

How Much Water Is the Atlanta Region Using Now and How Much More Does the Reallocation Proposal Provide

The Atlanta Region's public water supplies currently can withdraw an annual average of about 251 million gallons per day (MGD) from the River and 55 million gallons per day from Lake Lanier. This includes River withdrawals by the City of Atlanta, the Cobb-Marietta Water Authority, DeKalb and Fulton counties, and lake withdrawals by Gwinnett County and the

City of Buford. In addition to providing water to their own jurisdictions, these agencies provide water to nine other counties and more than 20 other cities.

Actual use during recent years has been less than allocated due to drought restrictions in '86, '87, and '88, and an unusually wet year in 1989. Unanticipated infrastructure problems in Atlanta, DeKalb and Fulton counties prevented full use of allocations again in 1990. Usage from the River is averaging about 230 MGD and 48 MD from the Lake. Claims that our requests for additional water are more than needed are incorrect due to a lack of understanding of recent conditions and the needs of public water supply systems.

Withdrawals don't represent consumptive use since a large part of the water withdrawn from the system in the Atlanta Region is treated and returned to the River. Wastewater treatment plants returned 211 MGD in 1988 and 225 MGD in 1989 to the River. This means that about 80 percent of the Atlanta Region's current withdrawals are put back in the River. Actual consumptive use from the Chattahoochee River/Lake Lanier due to the Atlanta Region in 1988 was 64 MGD and in 1989 was 47 MGD.

By the year 2010, Atlanta Region water demand forecasts call for an additional 128 MGD annual average from the Chattahoochee River and 50 MGD from Lake Lanier for the Atlanta Region over current allocations. The reallocation plan will provide for a portion of our existing withdrawals and future needs. When current and future allocations are added together, the total for the Atlanta Region is 379 MGD average from the River and 105 MGD from the Lake in the year 2010. Additional water for other lake communities of about 16 MGD has also been requested in the reallocation plan, for a total of 46 MGD in the year 2010.

Also, by the year 2010 wastewater treatment plans call for 358 MGD to be treated and returned to the Chattahoochee River. Therefore, consumptive use due to the Atlanta Region in the year 2010 will be 126 million gallons per day (379 + 105 - 358). This means that 74 percent of the water withdrawn by the Atlanta Region will be put back in the river. When withdrawals by others in the basin are included the return rate is 72 percent.

How Much will the Downstream Flows be Reduced Due to Atlanta Region's Future Use

The level of river flows in the Chattahoochee River are actually determined more by the manner the Corps of Engineers operates the dams on the river rather than the Atlanta Region's water use. A recent Corps report showed that flows downstream will increase in the future due to operational plans with reallocation. However, for purposes of illustration, the Atlanta Region's water use in the year 2010 can be imposed on historical average and drought river flows as follows.

In the year 2010, under average conditions the Chattahoochee River's flow will only be reduced due to the Atlanta Region by 5 percent% at Whitesburg, Georgia, 3 percent at Columbus, 2 percent at Columbia, Alabama and 1 percent at Chattahoochee, Florida, and less than 1 percent before the Appalachicola empties into the Gulf of Mexico. Even under worse case conditions such as 2010 demands and low river flows caused by drought such as 1988, the Atlanta Region's use amounts to 9 percent at Whitesburg, 5 percent at Columbus, 3 percent at Columbia, Alabama, and 1 percent at the Gulf of Mexico. The Atlanta Region's commitment to water restrictions in severe droughts as in 1988 will prevent such worse case examples from occurring.

The Atlanta Region has a right to reasonable use of the water resources of this area. The amounts of water discussed above are reasonable amounts for the largest metropolitan area in the southeastern United States. The reallocation of Lake Lanier will provide for this use to the year 2010.

Recent Activities in the Pursuit of Reallocation

When the Corps announced the change to reallocation we were concerned about our loss of momentum and additional delays in securing a long-term water supply. However, since our primary goal is to supply the Atlanta Region with a cost-effective and environmentally sound water supply -- leaders in the Atlanta Region threw their support behind the reallocation of Lake Lanier. We have been pursuing several courses of action to achieve our goals.

The first course of action was locally drafted and initiated federal legislation. A primary challenge with local legislation was the value associated with the displaced hydropower and the treatment of agencies currently benefitting from the hydropower. In 1989, the Atlanta Regional Commission held many meetings with local water utilities, state officials, and hydropower interests. A negotiated price of $62.5 million dollars for 238,000 acre feet of storage was reached. Legislation was drafted and presented to the Georgia Congressional delegation in hopes that it would be included in the 1990 Water Resources Act. It was not included in any of the bills.

The second course of action has been to support the Corps of Engineers as they work through their procedures for reallocation. In October of 1989 the Corps produced a draft Post-Authorization-Change Report (PAC), and in November of the same year held a series of public hearings in Georgia, Florida, and Alabama. Public concerns and false perceptions regarding the impacts to water quality, water supply downstream, navigation, recreation, economic development, and other upstream and downstream users have caused the reallocation proposal to become a controversial project. The PAC report has also helped focus many anti-Atlanta and anti-Corps sentiments, most of which have little to do with reallocation itself.

Impacts of Reallocation

The U.S. Army Corps of Engineers has determined that the impacts of reallocation are minor and insignificant. Impacts to downstream users, even in worst case conditions, are shown to be insignificant in the Corps' work.

Many of the fears of other users of the system are based on perceptions and not necessarily on fact. Examples include:

> Apalachicola Bay
>
> The State of Florida objects to the reallocation because it believes that impacts to the Apalachicola Bay were not considered and that reallocation of Lake Lanier presents potential harm to fish and wildlife resources in Florida's River and Bay system. This is not true. Impacts to the Apalachicola Bay were considered in the Corps work. The U.S. Fish and Wildlife Service (Panama City, Florida office) letter to the Corps of Engineers concurs with the Corps Post Authorization Report and favorably considers the project. It should be noted that the U.S. Fish and Wildlife Service previously opposed other alternatives for Atlanta such as a reregulation dam.

Consumptive Water Loss
Downstream users concerns that Atlanta will consume all the water and prevent their future growth are unfounded. This concern is probably due to the large numbers included in the reports for Atlanta's water supply. However, what most people don't realize is that most of this water will be used, treated, and put back in the Chattahoochee River.

The reallocation plan will be a permanent solution to a portion of our existing withdrawals and our future needs. As mentioned earlier, when current and future allocations are added together, the total withdrawal for the Atlanta Region would be 379 MGD average from the River and 105 MGD from the Lake. Seventy four percent (74 percent) of this water will be treated and returned to the Chattahoochee River.

Consumptive water losses in the year 2010 due to such things as lawn watering etc. in the Atlanta Region will amount to 126 MGD. This will result in only three percent less water at Columbus, Georgia, and 0.8 percent less water at the Florida state line under average conditions than if consumptive losses were 0. This is reasonable use.

The level of river flows in the Chattahoochee are determined more by weather conditions in the rest of the basin and how the Corps releases water from all of the projects rather than how much water the Atlanta Region uses. The Atlanta Region's use is a small percentage of the water in the system.

Navigation
In some respects navigation will improve with a change in releases from Buford Dam. The river will fall below the minimum level needed for navigation (6.5 ft.) less often under reallocation and would be between 6.5 and 9.0 ft. (at which time lighter loads can be hauled) more often than during historical record. Under reallocation the river levels would drop below the full depth for navigation during droughts only an additional four days. The full depth (9ft.) would be obtained under reallocation for 77 percent of the time versus 78.1 percent during historical record.

Water Quality
Reallocation will not impact water quality. EPD requires that 750cfs be maintained below Atlanta at all times. Requirements for additional clean-up of Atlanta's wastewater are progressing, including treatment for Combined Sewer Overflows and additional phosphorus removal at treatment plants. Water quality is expected to improve in the future.

Lake Lanier
Probably the biggest, but still minor, impact will result at Lake Lanier. Under worst case scenario of 2010 water demands, and no water restrictions or conservation during droughts, the reallocation would result in levels below 1066' for 16 percent of the time over historical record during the recreation season. The Corps estimated that during the 1980's reallocation would have resulted in a 0.9 percent decrease in visitor days. We feel this is minor, especially considering the report did not take into account the water restrictions that would be adopted during a drought. Also, future population growth was not considered in the recreation analysis. Even though some users may go elsewhere, new population will cause the loss to be filled.

Wise Resource Manangement

Recognizing the importance of good stewardship of our precious water resource, the State of Georgia, the Atlanta Regional Commission, and local governments in the Atlanta area have been working on and requiring water conservation for over ten years. Water conservation measures in the Atlanta Region include low-flow plumbing fixture requirements, water conservation based on pricing, education, low-water using landscaping, education, retrofit packages, low-water using landscaping policies, and an industrial policy which discourages water intensive industries from locating in the Atlanta Region.

ARC's water demand forecasts take water conservation into account by reducing water use factors in the future. Our water conservation-based forecasts coupled with the State of Georgia's water management and permit program insure that this water resource is shared in a responsible manner.

Opposition

Alabama is opposed to reallocation because it believes that it will preclude its use of water for economic development.

In the fall of 1989, Representative Tom Bevill used his influence over the Corps of Engineers to direct them to develop another study. This study will be a year 2040 study of the Coosa and Apalachicola-Chattahoochee-Flint River Basins. It appears to us that this study proposes to restudy the reallocation of Lake Lanier. The study also proposes to study many other aspects of water resources such as water quality standards and the Georgia Regional Reservoir program. The study would take a minimum of four years and $6 million. Eight years is a more realistic estimate for such a study. Language in the study plan and appropriations' legislation states that this study would form the basis for the allocation of water in the basins.

What this means to us is that Alabama is trying to set the stage to halt all growth in the Atlanta Region by the mid-1990s. Reallocation could be delayed for 10 years. If Alabama prevails, the long-term damage to the Atlanta Region's economy will be devastating and perhaps irreparable. We are on the threshold of establishing Atlanta as a global marketplace which will benefit the entire southeastern United States. The State of Alabama has filed a lawsuit and has been joined by the State of Florida to prevent the Corps from entering into any agreements for Atlanta's water supply.

It is very hard for those of us in the Atlanta Region to comprehend how Alabama and Florida can delay the Atlanta Region's use of its own water and how the Corps can support another study to contribute to this delay. The facts of this matter do not support such actions.

The Atlanta Region's future supply has been studied by the Corps of Engineers since 1972, and all studies have shown that the water should come from the Chattahoochee River/Lake Lanier system.

Even Congress concurred with this water supply source when it approved the reregulation dam in 1986. The only major difference between the reregulation dam and the reallocation of Lake Lanier is that changing the release patterns of Buford Dam is far less environmentally damaging than building a reregulation dam to do the job.

It is also very hard for us to understand how Alabama and Florida object when we see that our use is such a small percentage of flows in the system, even in drought times. We suspect that the quarrel may be more about how the Corps actually operates their dams, and the Atlanta Region is getting caught in the crossfire.

Summary

The Atlanta Region has been working in good faith for nearly twenty years with the appropriate federal agencies to secure a long-term water supply for the Atlanta Region. Many options have been examined. Out of these options-reallocation of Lake Lanier has been chosen as the best alternative by the Corps- because it will supply Atlanta's water through 2010 in the most cost-efficient, environmentally sound manner and without detrimentally impacting other users of this resource. Atlanta Region leaders feel enough study has been done, enough money spent. If the economic engine of the Southeast is to continue to run - it must have a reliable water source, and soon. We see absolutely no reason for further delay and ask you to move ahead to approve reallocation of Lake Lanier with swift action.

TABLE 15

CHATTAHOOCHEE RIVER SUMMARY

Peak Day Demands - MGD

	Current Permit	1990	1995	2000	2010
Cobb	58.00	58.00	70.00	85.62	109.74
DeKalb	121.0	129.46	140.82	150.79	165.86
Atlanta	170.0	186.41	199.67	210.95	244.10
North Fulton	10.0	20.93	27.36	32.59	41.27
Golf Courses	1.8	1.8	1.8	1.8	1.8
Gwinnett Duluth*			0.3	0.3	0.3
Total		396.60	439.95	482.03	563.07

Minimum Suggested Maximum Day Withdrawal Permits - MGD

	1990	1995	2000	2010
Cobb Intake	58.00	72.00	86.00	110.00
Pass-thru				
Douglasville/Douglas WSA	5.98	4.94	5.89	4.30
DeKalb Intake	130.00	141.00	151.00	166.00
Pass-thru				
Conyers	1.50	3.00	3.00	3.00
Henry County	1.95	3.75	5.60	7.70
Atlanta Intake	177.00	180.00	180.00	211.00
Pass-thru				
Clayton County	5.70	10.29	14.85	25.67
Fayette County	6.00	8.00	8.00	8.00
Forest Park	2.85	3.15	3.47	3.81
Atlanta/North Fulton Intake	30.00	46.00	64.00	75.00
Pass-thru				
Forsyth County	1.18	1.75	2.00	2.00
Golf Courses	1.8	1.8	1.8	1.8
Gwinnett Duluth*	0.3	0.3	0.3	0.3

*Note: The Duluth Plant could serve as emergency source for either Gwinnett or Fulton counties in emergencies where they are unable to withdraw their full allocations from their primary intakes. It is recommended that a permanent withdrawal permit of .3 MGD be provided for the plant and an emergency withdrawal of up to 10 MGD be allowed under certain conditions. These conditions should include: an emergency agreement between Gwinnett and Fulton counties; an agreement to only use this withdrawal on emergency days when the water cannot be withdrawn from the primary intakes; coordination with the Corps of Engineers through the ARC Short-Term Management Plan or the management mechanism that replaces it to insure that there is sufficient flow in the river. By the year 2010 Gwinnett County will no longer be able to use this plant as an emergency backup because river users will be using all of the water made available in the river.

TABLE 16

Minimum Suggested Withdrawal Permits for Lakes Lanier and Allatoona - MGD

	1990		1995		2000		2010	
	No. Max.	Max. Day	No. Max.	Max. Day	No. Max.	Max. Day	No. Max.	Max. Day
Lanier								
Gwinnett Intake	74.00	100.00	91.00	119.00	108.00	138.00	144.00	175.00
Pass-thru								
Conyers	8.57	11.47	9.60	12.68	11.65	15.38	17.61	23.25
Loganville	0.48	0.57	0.66	0.80	0.53	0.63	0.81	0.98
Buford	1.7	2.00	1.7	2.00	1.7	2.00	1.7	2.00
Allatoona								
Cobb Intake	56.00	62.00	65.00	72.00	65.00	72.00	72.00	80.00
Pass-thru								
Cherokee County	2.50	3.00	2.91	3.50	3.35	4.00	3.35	4.00
Paulding County	3.13	3.75	5.00	6.00	7.50	9.00	13.65	16.38
Mountain Park	0.10	0.12	0.10	0.12	0.10	0.12	0.11	0.14
Woodstock	.72	.87	1.03	1.23	1.21	1.45	1.38	1.90

*As amended 4/27/88.

STATEMENT BY SNAPPING SHOALS ELECTRIC MEMBERSHIP CORPORATION
POST OFFICE BOX 509
COVINGTON, GEORGIA 30209
COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION
SUBCOMMITTEE ON WATER RESOURCES
FIELD HEARING
DECATUR, GEORGIA
SEPTEMBER 28, 1990

I am Ed Robinson, Manager of Snapping Shoals Electric Membership Corporation headquartered in Covington, Georgia. Snapping Shoals EMC serves 38,171 members in Newton, Rockdale, Henry, and Dekalb Counties. Along with power we purchase from Oglethorpe Power Corp., we also purchase power from the Southeastern Power Administration.

Throughout the state, rural areas are facing increased economic hardships with the loss of agricultural and manufacturing workforces and the subsequent erosion of local tax bases. The ability to attract new business is of vital importance to our rural areas, and a key factor in that effort is reasonable rates for electricity. Being forced to replace the valuable power that Snapping Shoals EMC currently purchases from the Southeastern Power Administration without compensation would place undue economic hardship on our consumers. For that reason, we believe that the settlement reached to reallocate some of the water storage of Lake Lanier from hydropower to water use is a fair and equitable approach to providing the water supply needed by the Atlanta metropolitan region without harm to the rural electric consumers. The process set forth in the negotiations between the hydropower users and the Atlanta Regional Commission can be a precedent setting model for the country in addressing competing uses at Corps of Engineers projects.

It is imperative that the Atlanta region find a new source of municipal and industrial water supply in order to accommodate existing needs as well as to remain healthy into the 21st Century. We believe that to stifle the growth of the Atlanta region would be detrimental to the remainder of the state and the region. Just as important however, is for the Atlanta metropolitan area to recognize the importance of the electricity generated at Lake Lanier. The settlement reached between the hydropower customers and the water users to replace the SEPA power assists Snapping Shoals in continuing to provide electricity to our rural consumers in the most cost-effective manner. Furthermore, the ability to provide economical power to our consumers contributes to the efforts of the rural areas in attracting new industry as well as maintaining existing business.

We commend Congressman Jones for his leadership in resolving these difficult issues, and pledge our continued support. We thank the subcommittee for this opportunity to present our views.

Respectfully submitted,

J. E. Robinson

J. E. Robinson, Manager
Snapping Shoals
Electric Membership Corporation

Working for the Nature of Tomorrow®
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COMMENTS OF THE NATIONAL WILDLIFE FEDERATION, ALABAMA WILDLIFE FEDERATION, FLORIDA WILDLIFE FEDERATION, AND GEORGIA WILDLIFE FEDERATION

ON

DEVELOPING A LONG-TERM WATER RESOURCE PLAN FOR ATLANTA: WATER QUANTITY, WATER QUALITY, AND WATER REALLOCATION IN LAKE LANIER AND THE CHATTAHOOCHEE-FLINT-APALACHICOLA RIVERS BASIN

BEFORE THE
SUBCOMMITTEE ON WATER RESOURCES
U.S. HOUSE OF REPRESENTATIVES

By
Rudolph A. Rosen, Ph.D.
Director,
Southeastern Natural Resources Center
National Wildlife Federation

Atlanta, Georgia
September 28, 1990

Mr. Chairman, my name is Rudolph Rosen and I am Director of the National Wildlife Federation's Southeastern Natural Resources Center in Atlanta, a regional office of the Federation. I am accompanied today by James Wilson, staff officer with the Georgia Wildlife Federation. Mr. Wilson's graduate training is in regional planning. We are representing the views of the National, Alabama, Florida, and Georgia Wildlife Federations.

Thank you for inviting the Federations to appear before this Committee to discuss solutions to metro Atlanta's water quality and water quantity problems--problems that affect citizens in three states.

Our members are vitally concerned about the quality of our waters, here in Georgia, in the tri-state area, and throughout the nation. This concern extends from the health of aquatic life to the health of humans that recreate in our lakes and streams, eat fish from these waters, and get their drinking water from our nation's waterways. Our members are also committed to fostering responsible water conservation programs, thus ensuring sufficient water for all users, including fish and wildlife.

INTRODUCTION

Today we will focus our comments on a strategy for accommodating Atlanta's long-term water needs, without further compromising the integrity of surrounding waters or imposing hardships on other users of Atlanta's watersheds.

Citizens in the Atlanta metro area and downstream are faced with a difficult problem. The growth of Atlanta has created a big city on several small to medium-sized watersheds. Without conservation or water resources development, the Chattahoochee River and other metro waterways just do not have sufficient flows to supply municipal and industrial water needs and to provide the "flushing" and "dilution" capacity to readily handle the wastes of Atlanta's two million plus people and supporting industries.

Addressing Atlanta's long-term water needs requires addressing water quantity and water quality issues. But for Atlanta, because of its size and limited watersheds, steps above and beyond those necessary in many other big cities may be needed to supply water and protect water quality.

To date the Georgia Department of Natural Resources, along with county and city governments, has done a good job in reducing urban pollution discharge to the Chattahoochee River and other metro waterways. Indeed, there are many aspects of the State's water quality program that are working quite well. However, more needs to be done, especially if added water availability spurs growth and increases the volume of wastes needing treatment.

However, even where there have been major accomplishments, there are lingering problems. For example consider the following:

- The City of Atlanta still discharges raw sewage, which escapes treatment via combined sewer overflows.
- High phosphate loading (now being reduced) has caused rapid eutrophication in West Point Reservoir, downstream of Atlanta. Fish kills have already been reported in the reservoir.
- Fish from the Chattahoochee River below Atlanta have been found to contain PCBs, chlordane, dioxin, trichlorobenzenes, pentachloroanisole, dieldrin, mirex and other toxic contaminants. An internal EPA memorandum dated May 2, 1989, which reviews fish sampling data from the Chattahoochee River, states that the above-listed toxics, and others, are found at "background" levels above Lake Lanier, but below Atlanta, levels of these contaminants in fish are elevated.

RECOMMENDATIONS

The Wildlife Federations fully support seeking an alternative to the formerly proposed reregulation dam. However, we are not willing to embrace the currently proposed reallocation plan, based on the Corps of Engineers "Post Authorization Change Notification Report," because the current proposal leaves too many unanswered questions about important issues, such as impacts on water quality, water conservation, secondary impacts as a result of increased population growth, and environmental impacts in areas downstream of Atlanta all the way to the Gulf of Mexico.

We recommend development and implementation of a comprehensive, basin-wide approach to water resources planning to address Atlanta's water needs.

Already the lack of such an approach is resulting in confusion, inefficiency, and potentially great waste and expense.

For example, it is unlikely that the current lawsuits blocking implementation of the proposed reallocation plan would have been filed if a basin-wide approach, including all affected states, had been used to develop the plans for meeting Atlanta's water needs.

As an additional example, consider Georgia's development of a series of reservoirs, called regional reservoirs, to supply additional projected water needs. The state has not even conducted a simple region-wide Environmental Impact Statement (EIS) on the development of this reservoirs system, let alone done any serious work in evaluating the need for the reservoirs in coordination with reallocation, conservation, and other actions that could be taken on a region-wide basis. In fact, a permit for the first of these reservoirs is currently being evaluated, but the permit application lacks technically valid justification, lacks evaluation of available alternatives, lacks an EIS, provides for inadequate mitigation for impacts on wetlands, and lacks a plan to ensure water quality.

The potential adverse environmental and economic consequences of addressing Atlanta's water needs in a haphazard parochial manner are considerable. A comprehensive basin-wide approach is needed.

The remainder of our comments illustrate the components and rational for the comprehensive, basin-wide approach we recommend.

Short-Term Recommendations

The Corps Should Draft an EIS on the reallocation plan.

In January 1989, the National Wildlife Federation asked the Army Corps to suspend action on the water reallocation plan pending adoption of a formal EIS. An EIS should be the first step in addressing problems--perceived or real--with the currently proposed reallocation plan.

The EIS should evaluate additional reasonable alternatives which could be implemented alone or in combination with reallocation (such as a water conservation program or an alternative water pricing schedule), and must fully evaluate the effects of reallocation on long-term water quality and quantity in the Apalachicola-Flint-Chattahoochee Rivers basin. Included should be assessment of impacts alone and cumulatively on downstream water resources and habitats of wildlife, including living aquatic resources.

An EIS will provide the public needed information about water conservation needs and water quality, and address deficiencies in the Corps' Environmental Assessment, part of the "Post Authorization Change Notification Report."

Impacts of Growth and Development must be Addressed.

There must be full consideration of the foreseeable effects on water quality and downstream water users due to development and population growth that may result from the proposed action. The sole reason for water reallocation is to provide the Atlanta metro area additional water to support growth. In effect, reallocation can be viewed as a catalyst for growth. There are environmental impacts associated with such growth which should be addressed.

Eliminate CSOs.

Discharges at CSOs must meet the same water quality criteria and effluent limitations as that required by the primary permit serving the treatment facility to which the CSO is connected. The best way to deal with CSOs is to eliminate them. Please refer to the attached resolution passed by the National Wildlife Federation in 1990 on eliminating combined sewer overflows.

Institute a Water Conservation Program for the Atlanta metro Area.

A comprehensive water conservation program neither exists nor is ready for implementation, either separately or in combination with reallocation. It is likely that Atlanta already gets enough water to supply its population and future growth, provided implementation of a comprehensive regional water conservation program. Such a program would mix management improvements, pricing reforms, and local regulation.

Not only are comprehensive conservation programs unavailable, but the pricing scheme currently proposed by the Corps will undercut conservation. Reallocation of storage provides an opportunity to consider methods to integrate water conservation into the allocation and pricing mechanisms. Pricing based on water use, rather than on fixed storage costs, would help conserve water. However, the current proposal calls for a "lump sum" payment(s), meaning that the subsequent price of each water withdrawal equals zero. If the Corps set its price for water to recover construction costs through service charges, it could set the price of water much higher during summer and during drought periods to reflect the "scarcity" value of water. Such pricing would encourage purchasers to pass peak charges on to costumers and institute conservation programs.

Elements of a suitable conservation program include the following:

> A realistic rate structure should be implemented as discussed in the preceding paragraph. In addition, in Atlanta the more water you use the less it costs, while in Cobb County rates are the same at all levels of use. An inverted rate structure, where the more you use the more you pay, would help encourage conservation under either circumstance.
>
> Universal metering of all users should be instituted, which means use of water by everyone would be

measured, and users would be charged for the exact amount of water used.

Improved landscape practices should be encouraged, such as use of native vegetation that requires less water (known as xeriscape), would reduce demand for outdoor watering.

Use of the most efficient plumbing products available should be required because it is among the most cost effective water conservation measures available.

Long-Term Recommendations

Create and implement an effective basin-wide water conservation program, where all users of water within the entire river basin comply with a comprehensive conservation plan.

Require "zero degradation" from the current water quality standards (status quo at enactment of legislation), with a goal of attaining swimmable-fishable designated use throughout the Chattahoochee-Flint-Apalachicola Rivers Basin by 1998, including elimination of combined sewer overflows.

Evaluate and establish minimum flow for maintenance of water quality standards (designated use) for the Chattahoochee River.

Deauthorize the re-regulation dam.

Create an Interstate Compact between Alabama, Florida, and Georgia to promote and coordinate regional/basin-wide water resources planning.

Create and fund a regional water resources planning commission. The Interstate Compact could be administered by this commission and would have planning authority for basin-wide water resource use and development. The commission would include representatives from the three states, including citizen representation. The commission would initially focus on the Chattahoochee-Flint-Apalachicola Rivers basin, but adjust jurisdiction to additional shared waters basins as needed. The commission would be responsible for coordinating all water use and water quality activities, monitoring, and enforcement in shared waters basins.

Prohibit out-of-basin transfers of water except under stringent conditions. Although some incidental transfers already occur in Atlanta as a result of water supply and sewage discharge systems, we recommend that no major transfers be permitted except under the most stringent of conditions. Such conditions include preparation of an Environmental Impact Statement which explores alternatives and minimization of environmental impacts. Please also see the attached resolution passed by the National Wildlife Federation at our 1989 annual meeting regarding out-of-basin transfers for additional conditions.

* * *

We would appreciate the opportunity to work toward implementing the recommendations and bring forward examples in support of how to develop the initiatives recommended or provide case studies of similar actions taken in other communities, watersheds, and river basins.

We thank the committee for inviting us to provide our views.

WATER NEEDS FOR METRO ATLANTA

By

Dr. Philip L. Secrist

Presented at Rep. Ben Jones Public Hearing

September 28, 1990

Metro Atlanta must obtain more water from the Chattahoochee/Lanier system and Lake Allatoona or face severe curtailment in population and economic growth. Cobb County-Marietta Water Authority projects that in 20 years water demand in its service area will double and over the next 50 years triple. The Water Authority has completed a water supply plan for meeting its needs 50 years into the future. This plan calls for a combination of water conservation, wastewater reuse, groundwater development, and additional surface water supplies.

Much progress has already been made in the area of water conservation. The Water Authority created a full-time staff position for a water conservation specialist/coordinator in early 1989 and at present is the only water utility in Georgia with such a position. The person filling this position, Fox McCarthy, has been extremely active in the rapid development taking place in Atlanta and throughout Georgia in water conservation. He is currently president of Georgia Water-Wise, a newly formed non-profit organization composed of members from the green industry, landscape architects, water utilities, etc., that are a motivating and moving force behind efforts to conserve water both inside and outside the home. They have also been instrumental in having the University of Georgia County Extension Service produce a booklet on "How to Xeriscape in Georgia" that should be ready for distribution by the first of next year.

ARC has been successful in passing three resolutions pertaining to water conservation. These are: 1) ultra-low flow plumbing devices for new construction, 2) summer surcharge pricing structure on water, and 3) Xeriscape requirements. These efforts should ultimately reduce metro Atlanta's water requirements by 10 to 20 percent.

Reuse of treated wastewaters for non-potable purposes, such as landscape irrigation, golf courses, industrial processes, etc., will help to reduce future water needs. Even though this approach has been successfully used in Florida, Arizona, California, etc., it will have less overall applicability in Georgia because of our seasonal rather than year-round need. Even so, it can bring about some reduction in water needs, especially with golf courses.

Until recently, groundwater was not seriously considered as a major source of water in North Georgia because of crystalline bedrock subsurface which was thought to have low water yields. City of Fayetteville, however, recently drilled three wells that have a combined yield of 1.3 MGD. The Water Authority is in the process of selecting a firm to identify potential well sites throughout Cobb County. It hopes to ultimately supplement its surface water supply with approximately 20 to 25 MGD from groundwater. It is also encouraging new residential and commercial developments to drill wells for meeting irrigation needs rather than relying on surface water supplies.

Even with the above mentioned efforts, most of metro Atlanta's future water must come from existing (Lanier and Allatoona) and future (12 EPD reservoirs plus others) reservoirs. Hence, additional reallocation of Lakes Lanier and Allatoona must occur. It is unreasonable, uneconomical, and maybe impossible to meet all of Atlanta's future needs solely by water conservation, reuse, and groundwater. Furthermore, because of the wetlands regulations, new reservoirs requiring destruction of wetlands cannot be built until existing reservoirs (Lanier and Allatoona) have been used to their maximum reasonable extent. When all factors are considered, Lake Lanier and to an even larger extent Lake Allatoona, have not been fully utilized with regard to water supply.

Limited modeling conducted for the Water Authority agrees with the Corps of Engineers conclusions that reallocation does not significantly impact downstream users. When considering the facts that 1) 95 percent of the flows in the Chattahoochee River at the Florida line originate from rainfall and run off below Lake Lanier, and 2) that approximately 70 percent of the flow used by Atlanta is returned to the Chattahoochee River, the impact of reallocation on downstream flows is insignificant. During a worst case drought condition, flows at the Florida line would decrease by less than 0.5%. For most years, there is more than enough flow and hence no impact on any user including power producers and recreationists.

Furthermore, modeling indicated that if the Corps operated Lake Lanier primarily for water supply rather than hydropower production, total energy production (primary and secondary) during a severe drought year would still be approximately 85 to 90% of that otherwise produced. Primary energy (firm capacity) under these conditions would probably be about one-half of that produced when operated primarily for hydopower production. Hence, significant energy procduction could still be be realized when operated for water supply during severe drought years, and during most of the years there would be no power loss. The impact on other users would be greatly lessened by eliminating hydropower production as the primary mode of operation.

Regarding water quality, the Chattahoochee River is in much better condition today than it was 30 years ago as a result of the hundreds of millions of dollars metro Atlanta spent during the 1960's through the 1980's for improving wastewater treatment facilities. Additional improvements are forth coming that will further improve the quality of the river. The City of Atlanta will spend in excess of 50 million dollars in the near future to provide treatment of the combined sewer overflows. Atlanta and the other utilities will also be spending hundreds of millions of dollars to provide treatment to meet the new phosphorus limits and other regulations imposed by EPA.

In closing, metro Atlanta is working hard to minimize its requirements for additional water from Chattahoochee/Lanier and Allatoona through water conservation, wastewater reuse, and groundwater development. However, even these measures, additional reallocation of Lakes Lanier and Allatoona and construction of additional regional reservoirs will ultimately be required to meet Atlanta's long term needs.

SUBMITTED TO: U.S. HOUSE OF REPRESENTATIVES
THE SUBCOMMITTEE ON WATER RESOURCES

SUBMITTED BY: MR. RON SEDER, PRESIDENT
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LAKE LANIER PROPERTY OWNERS ASSOC.

U.S. HOUSE OF REPRESENTATIVES

THE SUBCOMMITTEE ON WATER RESOURCES

Friday, September 28, 1990

Field hearing on the Long-term water supply needs of the Atlanta region from the Apalachicola-Chattahoochee-Flint River Basin and the operation of Buford Dam and Lake Sidney Lanier in meeting those needs.

Contents of the Lake Lanier Property Owners Association, Inc. written testimony submission.

- The Proposed Lake Lanier Reallocation Is Wrong, dated September 5, 1990.
- A March 15, 1990 document titled, Results of an Analysis of the "Draft Post Authorization Change Notification Report For The Reallocation Of Storage From Hydropower To Water Supply At Lake Lanier, Georgia," October, 1989, published by the U.S. Army Corps of Engineers.
- Copies of presentation charts titled, Lake Lanier Property Owners Association, Inc. Assessment of the "Post Authorization Change Notification Report For The Reallocation Of Storage From Hydropower To Water Supply At Lake Lanier, Georgia, October, 1989.

The three packages contain different levels of supporting detail. The September 5, 1990, package contains minimal support for the conclusions. The March 15, 1990, package contains more support for the conclusions. The final package contains copies of charts used in making presentations about the proposed reallocation. The presentation chart copies do not necessarily stand on their own, but after reading the other two packages, the charts should supply information beneficial to understanding the analysis.

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LAKE LANIER PROPERTY OWNERS ASSOC.

September 5, 1990

THE PROPOSED LAKE LANIER REALLOCATION IS WRONG

The Army Corps of Engineers has proposed a specific reallocation of Lake Lanier waters in its Draft Post Authorization Change (PAC) Report, dated October, 1989. The PAC Report recommendations would cause Lake Lanier to go down to unprecedented low levels. The PAC Report shows that the full recommended reallocation, if applied to the years 1986 through 1988, would have produced an average lake level four feet lower than actually occurred. That is after the application of a new Corps Water Control Plan which would have achieved an average lake level, during those same years, two feet higher than history.

There are many legitimate multiple uses of Lake Lanier waters, such as, flood control, downstream navigation, recreation, electric power generation, dilution of sewage in the river and water supplies. During dry times there is not enough water to satisfy fully all requirements, therefore, water allocations must be made against some prearranged criteria. Obviously the criteria should be established to give a wise and fair allocation of the water. Correct facts and evaluations are essential to establishing the proper criteria.

The PAC Report incorrectly concludes "the impacts of reallocation on recreation are considered minor and acceptable." A voluminous and comprehensive study, the "Lake Lanier Management and Economic Impact Study" (LLMEIS), done for the Corps and published in 1979, concluded "the relatively minor seasonal changes in lake levels on Lake Lanier in the past fifteen years have produced significant reductions in recreational use of the lake and in the economic benefits of the project."

The Corps conclusion about the impact on recreation varies greatly from the LLMEIS. Results from the two reports show a twelve (12) times difference. An annual one foot lower lake level reduces visitation days to the lake by 63,000 in the PAC Report, while the LLMEIS shows an 800,000 visitation day reduction. The PAC Report translates those fewer visitation days into a net impact to the national economy of $248,000, while updating the LLMEIS to 1989 shows an $18,000,000 direct impact to our local economies, a 70 to 1 difference. Applying the LLMEIS prediction methodology against the average 2 to 3 feet lower lake levels, reallocation would have produced during

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1980 to 1988, shows that the local economies would suffer more than a $40,000,000 annual reduction.

Another important input into the lake water allocation criteria is the value of lost electric power generation resulting from the water being allocated to other purposes. It must be remembered that virtually all water released at the Buford Dam, regardless of the primary reason for the release, is released through the generators and produces electric power. Our (Lake Lanier Property Owners Association) analysis shows that the PAC Report has greatly overstated the amount and value of lost power generation. For example, the PAC Report shows a 50 year loss, resulting from the proposed reallocation, expressed in current values, of $7.1 million. Our analysis concludes the real loss is $1.0 million.

The foregoing exposed differences demonstrate the PAC Report seriously undervalues the impact the proposed reallocation will have on recreation and significantly overvalues the impact to electric power generation. Therefore, the decision criteria incorrectly favor power generation over recreation.

An Additional problem with the PAC Report is that it considers Lake Lanier the only solution for the growing water supply demand. Ground water (wells) and more smaller reservoirs, which are considered feasible alternatives by some experts, are not considered alternate solutions to the growing water supply demand. Also, The PAC Report only satisfies the water supply demand to the year 2010, and then supposedly Lake Lanier will not be used for increased water supply beyond that point. Therefore, other solutions have to be found. Those solutions should be identified and implemented now to relieve some of the pressure on Lake Lanier.

As has been explained here, conclusions and recommendations in the PAC Report are based on some incorrect important inputs. The work needs to be redone with corrected inputs to allow fair and wise recommendations.

Ron Seder

Ronald E. Seder
President

LAKE LANIER PROPERTY OWNERS ASSOCIATION, INC.
March 15, 1990

RESULTS OF AN ANALYSIS OF THE "DRAFT POST AUTHORIZATION CHANGE NOTIFICATION REPORT FOR THE REALLOCATION OF STORAGE FROM HYDROPOWER TO WATER SUPPLY AT LAKE LANIER, GEORGIA", OCTOBER, 1989, PUBLISHED BY THE U. S. ARMY CORPS OF ENGINEERS.

Introduction

Several Board members of the Lake Lanier Property Owners Association (LLPOA) studied the Post Authorization Change (PAC) Report, as soon as the report was available. The Board quickly concluded there were serious errors in the facts, conclusions and resulting recommendations. Hundreds of hours of effort have been invested in the analysis and subsequent communication of the Board's findings.

Because reality is much different than presented in the PAC Report, it is essential that the reallocation, as proposed, not be implemented.

Voluminous LLPOA responses, disagreeing with the PAC Report, showing the detailed rationale behind the LLPOA conclusions, have been sent to the Corps of Engineers in Mobile, Alabama. An overhead projector presentation of the analysis, rationale, conclusions and recommendations, has been created. This presentation is being given to several audiences, including the Corps in Mobile and some elected officials.

LLPOA is also trying to get the results of their analysis to the public through newspapers, magazines, radio and television.

LLPOA believes they have a very strong and compelling story, much different than the PAC Report presents, that needs to get to as many people as possible.

Writing this report for public consumption is a most difficult task, because it should be brief enough to encourage interested people to read it, but also comprehensive enough to make it credible. This report will be longer than LLPOA would like it to be. However, They ask for your patience. They are trying to make their analysis, of the complex 400 page PAC Report, understandable, and thereby, convincing.

Also, part of the analysis depends on the findings of a report titled, "Lake Lanier Management and Economic Impact Study" (LLM&EIS). This study was done in 1979, under contract with the U. S. Army Corps of Engineers, Savannah District, by The Georgia Mountains Area Planning and Development Commission (now the Georgia Mountains Regional Development Center, GMRDC) in Gainesville, Georgia. The study was done as part of the Metropolitan Atlanta Area Water Resources Management Study . The GMRDC is a group of highly respected professionals, headed by Dr. Sam F. Dayton, the Executive Director. The LLM&EIS is a thorough in depth study described in a document of more than 400 pages.

The PAC Report Proposal

The stated purpose of the proposal is to reallocate 207,000 acre feet of storage in Lake Lanier, from hydroelectric power generation to water supply, to satisfy the water supply needs in the year 2010.

The way the PAC Report treats this situation will have serious negative impacts on Lake Lanier levels during the dryer months of the year and during dryer years.

The PAC Report introduces a new lake management approach, the Water Control Plan (WCP), which without reallocation, would generally keep more water in Lake Lanier than did the past management system.

The PAC Report then shows how the Post Authorization Change (reallocation) would generally lower lake levels. Applying the year 2010 reallocation impacts to the years of 1986 through 1988, as displayed in the PAC Report, shows that reallocation lake levels would have been, on average, four feet lower than history and six feet lower than the new Water Control Plan (WCP) could have produced (refer to attached graph).

Lake Lanier Recreation Economic Conclusions

PAC Report (P26): "THE IMPACTS OF REALLOCATION ON RECREATION ARE CONSIDERED MINOR AND ACCEPTABLE".

LLM&EIS (P65): ECONOMIC ANALYSIS REVEALS THAT RECREATION BENEFITS FAR EXCEED BENEFITS RESULTING FROM OTHER USES OF THE LAKE".

LLM&EIS (P115): THE RELATIVELY MINOR SEASONAL CHANGES IN LAKE LEVELS ON LAKE LANIER IN THE PAST FIFTEEN YEARS HAVE PRODUCED SIGNIFICANT REDUCTIONS IN RECREATIONAL USE OF THE LAKE AND IN THE ECONOMIC BENEFITS OF THE PROJECT".

LLM&EIS (P118): "A FUNDAMENTAL CONCLUSION WHICH CAN BE DRAWN

FROM THIS ANALYSIS IS THAT THE CURRENT PRACTICE OF RAPID FALL SEASON DRAWDOWN FOR THE BENEFIT OF POWER PRODUCTION COSTS THE REGIONAL RECREATION ECONOMY MORE IN THOSE FEW MONTHS THAN IS PRODUCED IN POWER REVENUES IN AN ENTIRE YEAR".

Lake Lanier Recreation Economy Size

PAC Report: Annual average for the years 1980 to 1988 was $64 million. This is determined by multiplying the national visitor day value of $3.94 times the number of visitor days.

LLM&EIS updated to 1989: Annual local economy is about $400 million. This includes a local visitor day value of about $22.

LLM&EIS updated to 1989: The portion of property values directly attributable to Lake Lanier is about $3 billion.

LLM&EIS updated to 1989: Estimated most probable cumulative economic impacts attributable to Lake Lanier for the years of 1958 to 1989 are $10 billion to $12 billion.

Impact of Lake Lanier Water Level on the Recreation Economy

PAC Report: Simulation shows that the average reallocation Lake Lanier level, during 1980 to 1988, would have been 2.4 feet msl lower than history and 3.12 feet msl lower than could have been produced by the new Water Control Plan.

PAC Report: Reallocation simulation also shows an annual impact, during 1980 to 1988, of 63,000 visitor days and $248,000 of recreation economy, for a one foot change in lake level.

LLM&EIS updated financially for 1989: Shows an annual impact of about 800,000 visitor days and about $18,000,000 of recreation economy, for a one foot change in lake level.

LLPOA Recreation Economy Conclusions

The local recreation economy is much larger than the economy sizing displayed in the PAC Report, and the impact of a one foot change in lake level, on the recreation economy, is about seventy times greater than displayed in the PAC Report. Therefore, lowering Lake Lanier levels will produce very damaging reductions in the local economy. The lower lake levels that would have been caused by reallocation, as shown in the PAC Report for the years 1980 to 1988, would impact the local recreation economy $40 million to $60 million per year.

Lake Storage Increase Required for Increased Water Supply Use

The Lake Lanier storage, required for water supply, is being brought into focus at this point in this report, because it is a significant factor in determining the costs resulting from lost power generation, and the charges to water supply users, presented in the next section of this report.

PAC Report: 207,000 acre feet of lake storage is to be set aside for water supply requirements. 79,700 acre feet for the current 85 Million Gallons per Day (MGD) direct lake withdrawal for Gwinnett, Gainesville, Cumming, etc.. 61,900 acre feet for an increase of 66 MGD in direct lake withdrawal, to a total of 151 MGD direct lake withdrawal in the year 2010. 65,400 acre feet for the additional weekend releases required for increased water supply withdrawals below Buford Dam, for Atlanta, etc.. Notice that the current water supply withdrawals below Buford Dam do not require water supply storage, apparently on the rationale that water satisfying more than just a water supply requirements, e.g. power generation, does not require dedicated storage.

LLPOA Analysis: The 79,700 acre feet implied in the present 85 MGD direct lake withdrawal should not be included in determining the incremental cost for loss of power generation capability, because it is not available today for power generation. Also the 65,400 acre feet of storage for additional Buford Dam releases on the weekends, in the year 2010, should not be considered as devoted solely to water supply, because those releases will also generate power. Virtually all water released at Buford generates power regardless of the prime reason for the release. Whether the water release be for water supply, downstream navigation, lowering the lake to desired flood protection levels, to dilute sewage effluent for required water quality, etc., the release generates power. The dollar value of the power generated may be different, but the power is generated and sold.

LLPOA Water Supply Storage Conclusions

The 61,900 acre feet of storage required for water supply direct withdrawal increases between now and the year 2010 is the only legitimate increase to consider when sizing lost power generation capability. It is a new withdrawal and is not released through the generators at the dam to generate power.

Cost of Lost Storage for Water Supply

PAC Report: Loss of storage to water supply in the year 2010 is 207,000 acre feet.

LLPOA Analysis: Loss of storage to water supply in the year 2010 is 61,900 acre feet.

PAC Report: Assumes the storage loss every year between now and the year 2010.

LLPOA Analysis: Assumes a growth in storage requirements between now and the year 2010 consistent with what might be expected in the growth of water supply usage. Therefore, the first year would be a very small percentage of the 2010 increment, the second year would be another small annual percentage growth, and so forth, until the 100% requirement is reached in the year 2010.

PAC Report: The report uses several different methods to calculate the costs to be allocated to local interests and selects the method showing the highest cost to make the cost determinations.

Revenues Forgone Method: The PAC Report shows a present worth of losses for power generation to be $7.1 million. LLPOA Analysis shows a present worth of losses for power generation to be $1.0 million.

Replacement Cost Analysis Method: The PAC Report shows a present worth of replacement costs for power generation to be $29.9 million. LLPOA Analysis shows a present worth of replacement costs for power generation to be $4.1 million.

Updated Cost of Storage Replacement Method: The PAC Report shows proportional replacement costs of storage to be $49.4 million. LLPOA Analysis shows a present worth of a growing proportional replacement costs of $6.3 million.

LLPOA Conclusions About the Cost of Lost Storage for Water Supply

The costs of the increased storage to be devoted to water supply are seriously overstated in the PAC Report (PAC Report = $49.4 million, LLPOA Analysis = $6.3 million).

The cost of revenues lost and/or replacement power costs are greatly overstated. $7.1 million vs. $1.0 million and/or $29.9 million vs. $4.1 million. Also LLPOA believes that the application of some creativity to marketing the different pattern of power generation, may even further reduce the lost revenues and replacement costs.

LLPOA Sizing of the Impact on a Real Electric Bill

Over the past few years we have occasionally heard the implication that reducing power generation at Buford Dam would significantly raise everyone's electric bill. We thought it wise to quantify that statement. Using numbers supplied in the PAC Report as a starting point, we calculated the average cost impact on the Southern Companies Subregion of the Southeastern Electric Reliability (SERC) Region, encompassing Georgia, Alabama, Eastern Mississippi and the panhandle of Florida. The cost increase of losing power, as presented in the PAC Report (which LLPOA has previously shown in this report to be overstated), was applied to the author's recent electric bill. The author's bill would increase in the year 2010 by one penny, from $171.96 to $171.97 as measured by current dollar values.

Using the LLPOA sizing of the water storage increase required, and a more logical growth of storage requirements would produce a cost increase of about 0.3 of a penny in 2010.

Both cases show an insignificant electric rate increase and if some further initiative were applied to the new world in the system, even that might be erased.

LLPOA Summary Conclusions

The process applied to the reallocation decisions in the PAC Report shows: a recreation economy valued much too low; Lake Lanier water level importance to the recreation economy greatly understated, to the point of being wrongly considered insignificant; the increase in the water supply storage significantly overstated, and that along with using the full year 2010 water supply storage for each year between now and 2010 for costing purposes, seriously overstates the present worth of power revenues lost, replacement power costs and the proportional current cost of replacement storage.

LLPOA Recommendations

* Do an in depth local Economic Impact Study.
    - Update the 1979 Lake Lanier Management and Economic Study.
* Do an in depth Environmental Impact Study.
* Make factual corrections to the PAC Report.
* Change the reallocation methodology to give the proper local values to the recreation economy (much more important) and lost power (greatly reduced importance) and, thereby, produce higher resultant Lake Lanier levels.
    - Do not release water just to generate electricity. Generate electricity only when water is released for other purposes.
    - If all of the storage now set aside for flood protection is not needed, as we have heard, raise the top level of the lake.

- Return cleaner sewage effluent to the river, allowing smaller minimum releases for water quality.

- Reduce water supply requirements of Lake Lanier.
  - @ Conservation of water by users.
  - @ Implement Regional Reservoirs now being planned by the State.
  - @ Establish more local reservoirs around Atlanta.
  - @ Use more ground water.
  - @ Focus on solutions for water supply after 2010 and consider earlier implementation.

LAKE LANIER
PROPERTY OWNERS ASSOC.

LAKE LANIER PROPERTY OWNERS ASSOCIATION, INC.

ASSESSMENT OF THE

POST AUTHORIZATION CHANGE NOTIFICATION REPORT FOR THE REALLOCATION OF STORAGE FROM HYDROPOWER TO WATER SUPPLY AT LAKE LANIER, GEORGIA, OCTOBER, 1989

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PRESENTATION OUTLINE

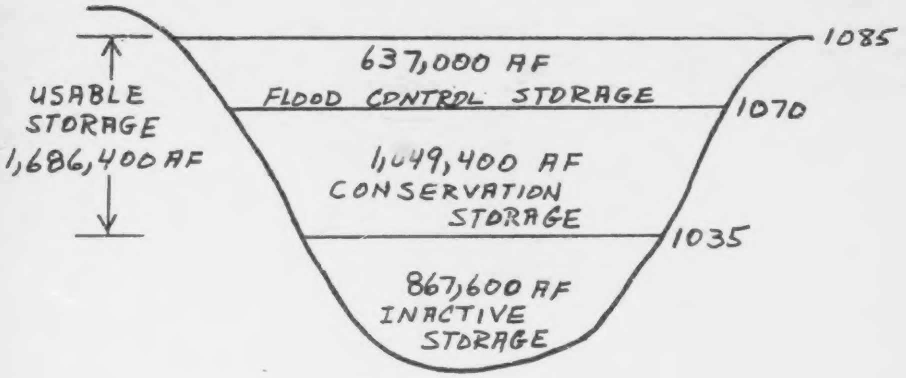
- Introductory Information
- Lake Levels
- Recreation Economy
- Water Storage
- Lost Power Generation
- Impact On Electric Rates
- Summary
- Recommendations

REALLOCATION PURPOSE

Change Lake Lanier Priorities to Devote More Lake Water Storage Exclusively to Water Supply.

Augment natural river flows during drier months of the year and the driest years to satisfy increased water supply requirements.

LAKE VOLUMES



WATER STORAGE TO BE DIVERTED TO WATER SUPPLY IS 207,000 ACRE FEET

LAKE WATER WITHDRAWALS

Water supplies direct from the lake.

- Gwinnett, Gainesville, Cumming, etc.

Water releases at Buford Dam.

- Virtually all releases generate power.
- Water supplies from the Chattahoochee.
- Lower lake to acceptable levels.
- Downstream navigation.
- Water quality.
- Adjust downstream lake levels.
- Just to generate power.

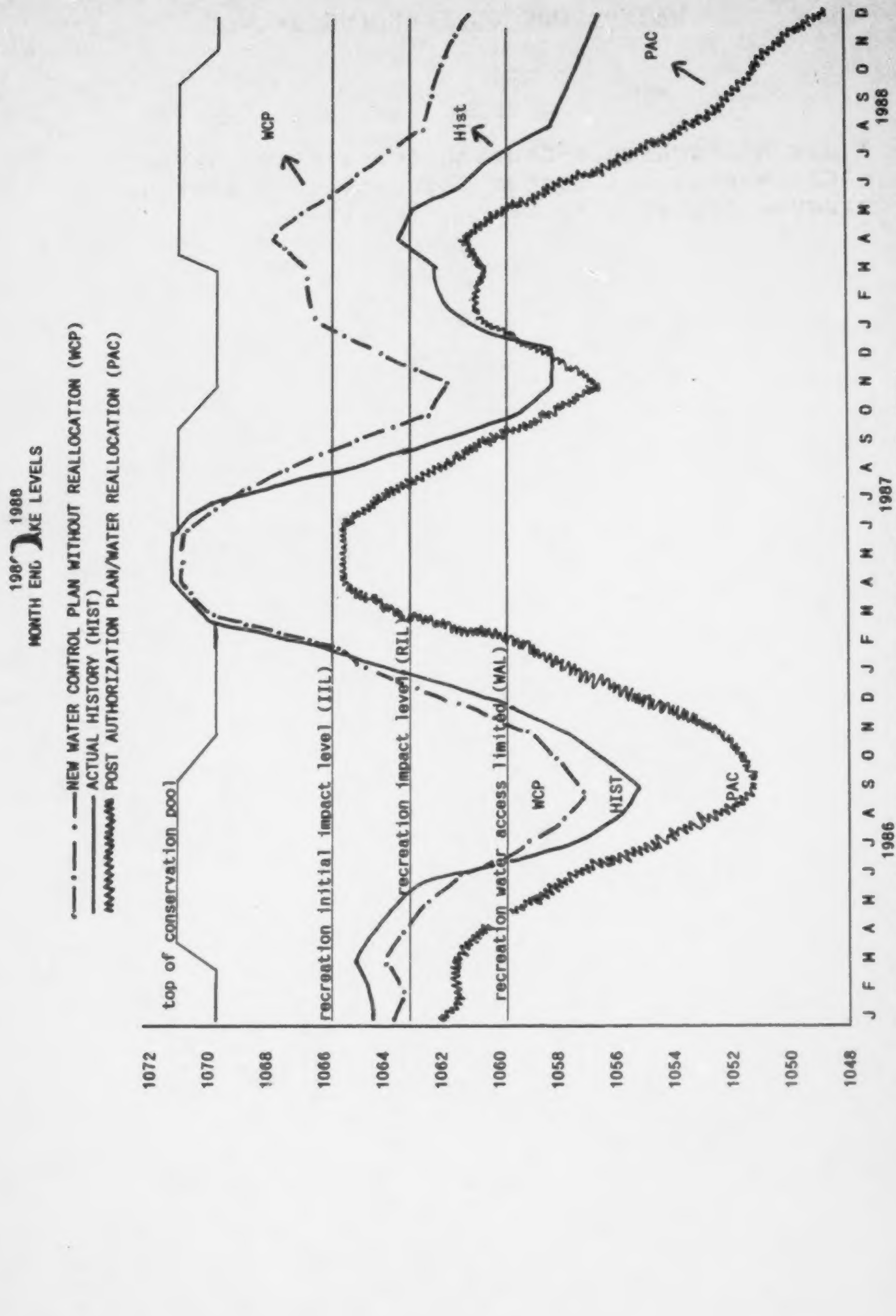
LLPOA CONCERN WITH REALLOCATION

- Lower Lake Lanier levels during the drier months of the year.

- Much lower Lake Levels during drier years.

WATER CONTROL PLAN (WCP)

- A new Apalachicola-Chattahoochee-Flint River (ACF) management system that will, on average, produce higher Lake Lanier levels.



SOURCE: POST AUTHORIZATION CHANGE NOTIFICATION REPORT (OCTOBER 1989)

LAKE LANIER MANAGEMENT AND ECONOMIC IMPACT STUDY
(LLM&EIS)

- Prepared under contract with the U. S. Army Corps of Engineers, Savannah District, in 1979.

- Was done as part of the Metropolitan Atlanta Area Water Resources Management Study.

- Was done by the Georgia Mountains Regional Development Center (current name).

RECREATION IMPACT CONCLUSIONS

PAC Report (October, 1989)

"THE IMPACTS OF REALLOCATION ON RECREATION ARE CONSIDERED MINOR AND ACCEPTABLE". (P26)

LLM&EIS (August, 1979)

"ECONOMIC ANALYSIS REVEALS THAT RECREATION BENEFITS FAR EXCEED BENEFITS RESULTING FROM OTHER USES OF THE LAKE". (P65)

"THE RELATIVELY MINOR SEASONAL CHANGES IN LAKE LEVELS ON LAKE LANIER IN THE PAST FIFTEEN YEARS HAVE PRODUCED SIGNIFICANT REDUCTIONS IN RECREATIONAL USE OF THE LAKE AND IN THE ECONOMIC BENEFITS OF THE PROJECT". (P115)

RECREATION ECONOMY

PAC Report

- $64 Million annual net add to national economy

LLM&EIS

- $400 Million annual direct lake economy.
- $3 Billion property values attributable to Lake Lanier.
- $10 Billion to 12 Billion cumulative direct and indirect economic impact, 1958-1989.

LAKE LEVEL AND RECREATION IMPACT COMPARISONS

	PAC Report	LLM&EIS Method
Visitation Days per Year per Foot of Lake Level	63,000	800,000
Recreation Value per Foot of Lake Level	$248,000	$18,000,000
Historic/PAC Recreation Value Difference	$596,000	$40,000,000
WCP/PAC Recreation Value Difference	$777,000	$60,000,000

SIZING REALLOCATION STORAGE

Increase in water storage.

- Between now and the year 2010.
- Devoted exclusively to water supply.
- Determine the value of lost power generation.

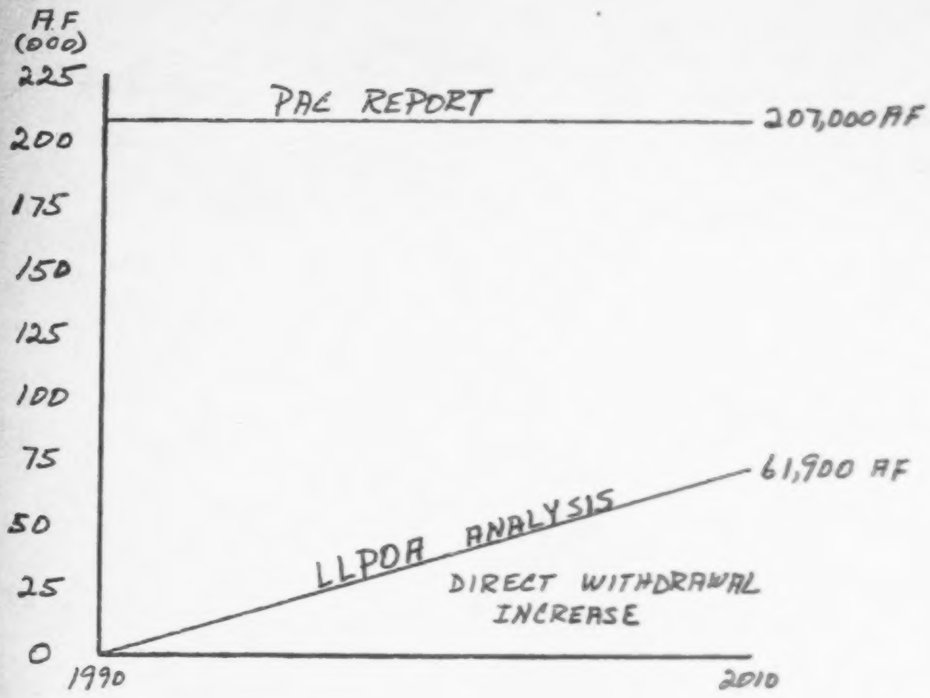
WATER STORAGE TRANSFER FROM POWER GENERATION TO WATER SUPPLY

TOTAL 207,000 AF

65,400 AF	2010 INCREASE IN BUFORD DAM WEEKEND RELEASES
61,900 AF	2010 DIRECT LAKE WITHDRAWAL INCREASE (GWINNETT, GAINESVILLE, CUMMING, ETC.)
79,700 AF	1990 DIRECT LAKE WITHDRAWAL (GWINNETT, GAINESVILLE, CUMMING)

THE 2010 DIRECT LAKE WITHDRAWAL INCREASE IS THE ONLY REAL REDUCTION OF POWER GENERATION

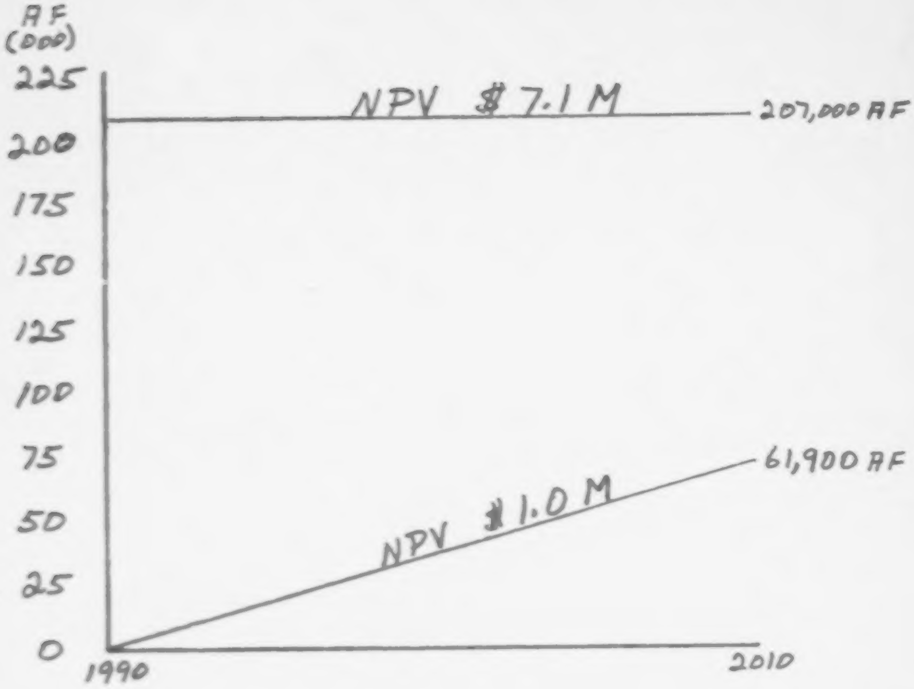
INCREASED WATER STORAGE CASES



PAC REPORT = 207,000 AF EACH YEAR

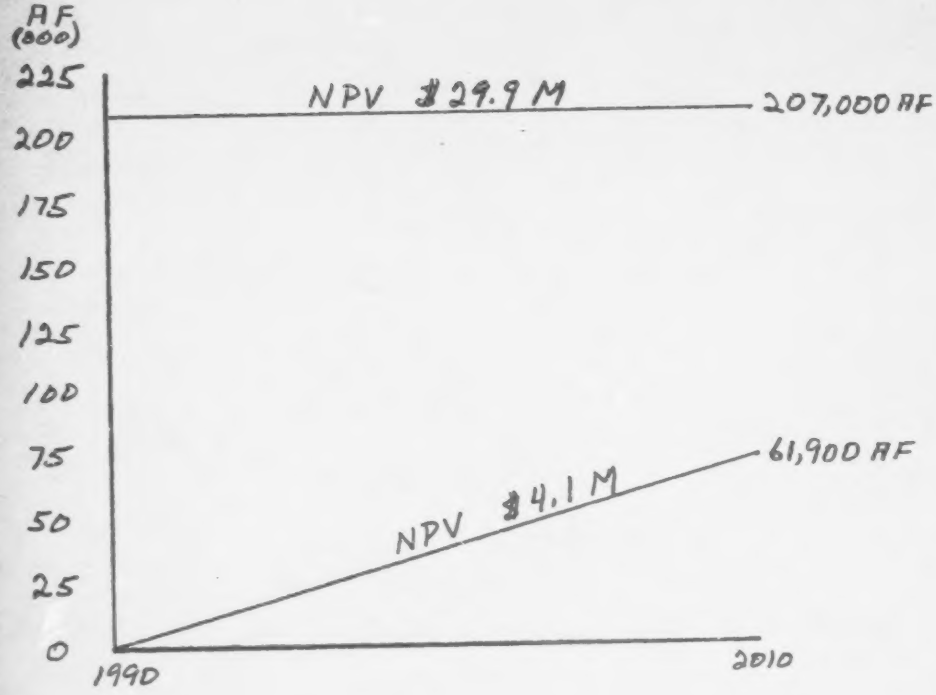
LLPOA = GROWTH FROM "0" AF IN THE
FIRST YEAR TO 61,900 AF IN 2010

REVENUES FOREGONE



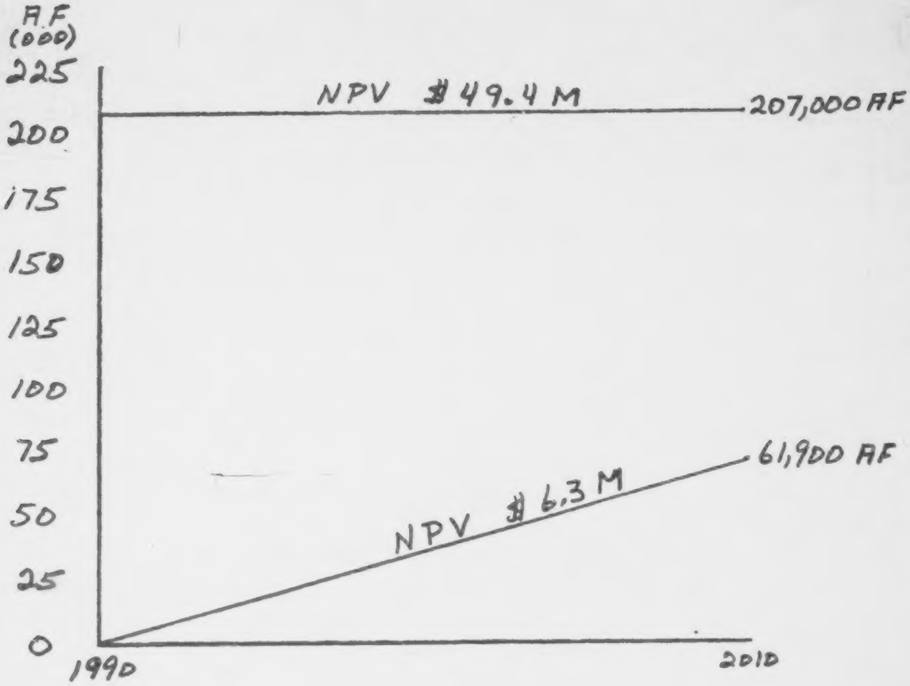
NPV FOR 50 YEARS

POWER REPLACEMENT COST



NPV FOR 50 YEARS

STORAGE REPLACEMENT COST



NPV FOR 20 YEARS
THEN PAID OFF

ELECTRIC POWER CHANGES
(207,000 AF)

Buford power loss - PAC Report

- 21 MW (25%) dependable power generation loss.
- 23,497 MWH (11.1%) annual energy loss.

Impact on a real electric bill (Note 1)

- Actual October, 1989	$171.96
- After year 2010 reallocation	$171.97
* Difference (Note 2)	$ 0.01

Note 1: Assumes average distribution of lost Buford power for the Southern Companies Subregion of the Southeastern Electric Reliability Council (SERC) Region, encompassing Georgia, Alabama, eastern Mississippi and the panhandle of Florida.

Note 2: 61,900 AF of storage would produce a difference of 0.3 of one cent.

SUMMARY

Recreation economy is understated

- $64M/year national impact - PAC Report.
- $400M/year - GMRDC estimate based on LLM&EIS
    - * Plus $3 BILLION in property values.

Lake level impact on recreation economy is understated.

- $777,000 per year - PAC Report
- $60,000,000 per year - LLM&EIS method

Reduction in lake storage for power generation is overstated.

- 207,000 AF - PAC Report
- 61,900 AF - LLPOA analysis

Cost of lost power generation is overstated

- Revenues Forgone, $7.1M vs $1.0M
- Power Replacement Cost, $29.9M vs $4.1M
- Storage Replacement Cost, $49.4M vs $6.3M

Lost power generation has negligible impact on electric billing rates.

RECOMMENDATIONS

* Do an in depth local Economic Impact Study

    - Update the 1979 study done by the Georgia Mountains Regional Development Center

* Do an in depth Environmental Impact Study

* Make factual corrections to the PAC Report

* Raise Reallocation lake levels

    - Do not release water just to generate electricity

    - Allow a higher conservation pool top level

    - Return cleaner effluent to the river, allowing smaller minimum releases for water quality

    - Reserve less lake storage for water supply

        * Conservation by users
        * Implement State planned Regional Reservoirs
        * Establish more local Reservoirs around Atlanta
        * Use more ground water
        * Focus on solutions for water supply after 2010 and consider earlier implementation

REGIONAL HEARING BEFORE THE
COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION
WATER RESOURCES SUBCOMMITTEE
U.S. HOUSE OF REPRESENTATIVES

SEPTEMBER 28, 1990

MANUEL MALOOF CENTER
1300 COMMERCE DRIVE
DECATUR, GEORGIA

TESTIMONY

OF

GEORGE L. SIMPSON, JR., Ph.D.
ATLANTA CHAMBER OF COMMERCE
WATER SUPPLY TASK FORCE CHAIRMAN

235 INTERNATIONAL BOULEVARD, N.W.
POST OFFICE BOX 1740
ATLANTA, GEORGIA 30301

STATEMENT
OF
GEORGE L. SIMPSON, JR., Ph.D.
THE ATLANTA CHAMBER OF COMMERCE

BEFORE THE
COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION
U.S. HOUSE OF REPRESENTATIVES

SEPTEMBER 28, 1990
DECATUR, GEORGIA

I. INTRODUCTION

MR. CHAIRMAN AND MEMBERS OF THE COMMITTEE, MY NAME IS GEORGE L. SIMPSON, JR. THE ATLANTA CHAMBER OF COMMERCE AND THE METRO BUSINESS FORUM, WHOM I REPRESENT HERE TODAY, APPRECIATE THIS OPPORTUNITY TO PROVIDE THE COMMITTEE WITH THEIR VIEWS ON WATER RESOURCES ISSUES IMPORTANT TO THE METROPOLITAN ATLANTA AREA. ON BEHALF OF THE ATLANTA CHAMBER OF COMMERCE, I WOULD LIKE TO COMMEND CONGRESSMAN JONES FOR HIS LEADERSHIP AND HIS EFFORTS ON THE WATER RESOURCES SUBCOMMITTEE TO PRESERVE THE QUALITY OF LIFE WE ENJOY IN OUR GREAT METROPOLITAN AREA.

TODAY, I WISH TO ADDRESS BOTH WATER QUALITY AND WATER SUPPLY ISSUES RELATED TO OUR MOST VALUABLE RESOURCE. AS CHAIRMAN OF THE WATER SUPPLY TASK FORCE, I OVERSEE THE IMPLEMENTATION OF THE CHAMBER'S WATER SUPPLY PLANNING DOCUMENT. THE REPORT ADDRESSES MANY PERTINENT CONCERNS RELATED TO WATER SUPPLY IN THE ATLANTA REGION APPROPRIATE FOR SUPPORT BY THE ATLANTA BUSINESS COMMUNITY.

II. BACKGROUND

AS YOU KNOW, THE CHAMBER IS IN THE BUSINESS OF ECONOMIC DEVELOPMENT. AS EARLY AS 1914, THE CHAMBER LAUNCHED A NATIONAL CAMPAIGN TO ATTRACT NEW BUSINESS TO THE CITY. BY THE MID-1960s, ATLANTA'S REPUTATION AS THE CROSSROADS OF THE SOUTH WAS SECURE ON LAND AND IN THE AIR. AS THE DECADE OF THE 1980s DAWNED, ATLANTA HAD ACHIEVED NATIONAL AND GROWING INTERNATIONAL PROMINENCE. BY 1984, MORE THAN 36 CONSULAR AND TRADE OFFICES REPRESENTING EVERY CONTINENT HAD OPENED HERE, AND BY 1989 OVER 60 COUNTRIES WERE OFFICIALLY REPRESENTED IN ATLANTA. WITH THE ONSET OF THE 1990s AND THE ANNOUNCEMENT OF THE SITE OF THE 1996 OLYMPIC GAMES, ATLANTA HAS TRULY RISEN TO INTERNATIONAL STATURE.

WATER, IRONICALLY, IS THE FUEL FOR THE FIRE OF ECONOMIC DEVELOPMENT. TURNING THE FAUCET OFF TO METRO ATLANTA'S WATER WILL SEND A MESSAGE WORLDWIDE. AS THE FINANCIAL, COMMUNICATION AND TRANSPORTATION CAPITAL OF THE SOUTHEASTERN UNITED STATES, THE BENEFITS OF GROWTH IN THE METRO AREA HAVE A TREMENDOUS POSITIVE EFFECT ON THE REST OF THE STATE, ALABAMA, SOUTH CAROLINA AND FLORIDA. THE EFFECTS OF A RECESSION CAUSED BY WATER SHORTAGE WILL BE EQUALLY DEVASTATING. THE UNITED STATES CONGRESS HAS AN IMPORTANT DECISION TO MAKE. REFUSE TO REALLOCATE WATER FOR DRINKING PURPOSES TO METRO ATLANTA AND WATCH AS THE ENTIRE REGION SUFFERS; OR SUPPLY ONE OF AMERICA'S LEADING CITIES' WITH THE WATER IT NEEDS TO COMPETE WITH INTERNATIONAL PLAYERS.

A SENSE OF URGENCY IS ARISING IN ATLANTA, NOT DUE TO A LACK OF RAINFALL, BUT DUE TO THE DIFFICULTIES IN MANAGING THE WATER WE DO RECEIVE. WE SIMPLY DO NOT HAVE THE STORAGE CAPACITY TO ACCOMMODATE FUTURE DEMAND.

ATLANTA HAS FOR MANY YEARS BEEN TURNING AWAY WATER-INTENSIVE INDUSTRIES TO OTHER PARTS OF THE STATE AND COUNTRY. GOVERNMENT OFFICIALS REALIZED EARLY ON THAT SUFFICIENT WATER WOULD BECOME THE KEY TO CONTINUED SUCCESS AND MUST, THEREFORE, BE USED WISELY. MORE THAN 43 COUNTIES IN A 60 MILE RADIUS OF DOWNTOWN ATLANTA WILL EXPERIENCE EXTREME HARDSHIP IF THE PROVERBIAL WELL IS ALLOWED TO RUN DRY. NEARLY 55 PERCENT OF GEORGIA'S POPULATION CURRENTLY RESIDES IN THE 43 COUNTY AREA, WHILE REPRESENTING ONLY 23 PERCENT OF THE TOTAL LAND AREA IN THE STATE.

III. WATER QUALITY

THE TREMENDOUS GROWTH OF THE SOUTHEAST IN THE LAST FEW DECADES HAS UNDOUBTEDLY PUT ATLANTA AND GEORGIA INTO THE FOREFRONT OF GLOBAL ECONOMIES. BUT THERE ARE, AS THE AXIOM READS, TWO SIDES TO EVERY COIN. RAPID GROWTH CAN CREATE AN INCREDIBLE STRAIN ON THE ECOSYSTEM. THIS INEVITABILITY MUST NOT NECESSARILY BE NEGATIVE. PROPER PLANNING AND MITIGATION CAN SEVERELY LESSEN THE IMPACT OF GROWTH AND DEVELOPMENT. DEVELOPMENT PRACTICES EXIST THAT CAN ENSURE THE VIABILITY OF AN ENVIRONMENT THAT SUPPORTS THE CONTINUED GROWTH OF A REGION. THE ATLANTA CHAMBER OF COMMERCE AND SEVERAL STATE, REGIONAL AND LOCAL AGENCIES ARE ACTIVE IN ADDRESSING THE PROBLEMS AND FORMULATING SOLUTIONS TO REGIONAL WATER ISSUES.

THE REGION IS IMPLEMENTING A REGIONAL WASTEWATER MANAGEMENT PLAN TO ADDRESS THE REGION'S NEEDS FOR WASTEWATER TREATMENT THROUGH 2040. THE METROPOLITAN

RIVER PROTECTION ACT REQUIRES THE PROTECTION OF LAND WITHIN SENSITIVE RIVER BUFFERS. SEVERAL PROGRAMS ARE UNDERWAY TO PROTECT AND MONITOR WATER QUALITY INCLUDING NON-POINT SOURCE POLLUTION AND WATERSHED PROTECTION STANDARDS. STATE STANDARDS FOR CONTROLLING THE QUALITY OF GROUNDWATER ARE CONTAINED IN THE SOLID AND HAZARDOUS WASTE MANAGEMENT ACTS.

DESPITE GREAT STRIDES IN FEDERAL AND STATE PROGRAMS, POINT SOURCE POLLUTION CONTINUES TO BE A FACTOR IN STREAM DEGRADATION IN THE ATLANTA AREA. IN ATLANTA, AS ELSEWHERE IN GEORGIA AND THROUGHOUT THE U.S., AGING INFRASTRUCTURE STILL ALLOWS FOR THE COMBINED DISCHARGE OF BOTH STORMWATER AND SEWAGE INTO SEVERAL AREA STREAMS, DURING HIGH FREQUENCY RAINS. EPA HAS NOT AT THIS TIME PROVIDED DEFINITE REGULATIONS OR STANDARDS FOR CSOs. THE STATE OF GEORGIA, THE CITY OF ATLANTA AND THE COUNTY OF FULTON HAVE FORMED A TASK FORCE TO DEVISE WAYS TO REDUCE CSO EVENTS. THE MAIN IMPEDANCE TO THE ELIMINATION OF THIS WATER QUALITY PROBLEM IS FUNDING. THE STATE AND LOCAL GOVERNMENTS SIMPLY DO NOT HAVE THE FUNDS NECESSARY TO COMPLY WITH CLEAN WATER REGULATIONS.

LED BY A REGIONAL BAN IN THE ATLANTA AREA, THE GEORGIA LEGISLATURE PASSED A BILL LAST SESSION IMPOSING A STATEWIDE BAN ON THE SALE OF HIGH-PHOSPHOROUS DETERGENTS. THIS INITIATIVE HAS RESULTED IN A 50 PERCENT REDUCTION IN THE AMOUNT OF PHOSPHOROUS DISCHARGED INTO THE CHATTAHOOCHEE.

THESE PROGRAMS, AS WELL AS CONTINUOUS MONITORING AND RESEARCH, ILLUSTRATE THE CONCERN OF LOCAL AND STATE OFFICIALS. METROPOLITAN ATLANTA REALIZES THE NEED FOR IMPROVING WATER QUALITY AS AN INSTRUMENT FOR CONTINUED PROSPERITY.

IV. WATER SUPPLY

OBVIOUSLY, A BROAD RANGE OF WATER RESOURCE ISSUES NOW COMMAND OUR ATTENTION. HOWEVER, WATER SUPPLY IS THE MAIN CONCERN THAT I BRING BEFORE YOU TODAY. WE, THE ATLANTA REGIONAL COMMISSION AND STATE OFFICIALS AGREE ON THE NEED FOR THE REALLOCATION OF A PORTION OF LAKE LANIER'S STORAGE CAPACITY TO MEET THE SHORT-TERM WATER NEEDS OF THE ATLANTA METROPOLITAN AREA. AFTER THIS IMPORTANT ISSUE, I WILL FOCUS ON A DISCUSSION OF THE LONG-TERM NEEDS OF THE ATLANTA REGION.

UNTIL 1988 THE REGION, CORPS, AND CONGRESS AGREED THAT A NEW DAM TO CAPTURE POWER GENERATION SURGES FROM LAKE LANIER WAS THE SOLUTION TO THE REGION'S SHORT-TERM WATER

NEEDS. IN 1988 THE RE-REGULATION DAM WAS DROPPED BY THE U.S. ARMY CORPS OF ENGINEERS AS THE "PREFERRED ALTERNATIVE" TO RESOLVING METRO ATLANTA"S WATER SUPPLY NEEDS, AND THE CORPS SETTLED ON THE PARTIAL REALLOCATION OF LAKE LANIER (FROM POWER GENERATION TO WATER SUPPLY) AS THE MEANS TO PROVIDE ADDITIONAL WATER TO METRO ATLANTA.

ALTHOUGH LOCALLY INITIATED REALLOCATION LEGISLATION WAS PREPARED FOR THE GEORGIA DELEGATION IN 1989, DUE TO LACK OF CONSENSUS WITHIN THE DELEGATION AND OPPOSITION FROM THE ALABAMA DELEGATION, THE LEGISLATION WAS NOT INCLUDED IN THE 1990 WATER RESOURCES BILL.

ON JUNE 28, 1990, THE STATE OF ALABAMA FILED SUIT IN FEDERAL DISTRICT COURT, NORTHERN DISTRICT, IN BIRMINGHAM AGAINST THE CORPS TO PREVENT DIVERSION OF MORE WATER FROM THE CHATTAHOOCHEE AND COOSA RIVERS, BOTH OF WHICH FLOW INTO ALABAMA FROM GEORGIA.

THE SUIT REQUESTS PERMANENT INJUNCTION TO REALLOCATION BUT ALSO, IF GRANTED, PREVENTS THE CORPS FROM SIGNING A NEW CONTRACT WITH LOCAL GOVERNMENTS FOR USE OF THE PREVIOUSLY APPROVED 327 MILLION GALLONS PER DAY (MGD) PLUS AN ADDITIONAL 20 MGD. (IT SHOULD BE NOTED THAT THE CORPS AND ARC ARE CURRENTLY OPERATING UNDER WHAT IS CALLED THE "SHORT TERM PLAN" WHICH ALLOWS WITHDRAWAL OF AN ADDITION OF 50 MGD FOR A TOTAL OF 377 MILLION GALLONS PER PEAK DAY SERVICE. THIS CONTRACT EXPIRED IN DECEMBER, 1989.) ALTOGETHER, THE CURRENT CONTRACT WILL CALL FOR A TOTAL OF 397 MILLION GALLONS PER PEAK DAY SERVICE.

THE INJUNCTION AGAINST REALLOCATION, IF GRANTED, WOULD PREVENT THE WITHDRAWAL OF AN ADDITIONAL 178 MGD FROM THE CHATTAHOOCHEE. WITHOUT REALLOCATION, THE METRO AREA WILL BE UNABLE TO MEET THE DEMANDS OF 800,000 NEW RESIDENTS FORECAST TO ARRIVE BY THE YEAR 2010. IN SUMMARY, THE ALABAMA SUIT AFFECTS BOTH CURRENT ALLOTMENT OF OUR EXISTING WATER SUPPLY AND REALLOCATION WHICH IS NECESSARY TO GUARANTEE ADDITIONAL WATER FOR GROWTH. WITHOUT A GUARANTEED WATER SUPPLY, THE STATE MAY IMPOSE MORATORIA ON NEW WATER HOOKUPS IN THE VERY NEAR FUTURE.

IT IS IMPORTANT TO NOTE THAT ACCORDING TO THE CORPS POST AUTHORIZATION CHANGE STUDY, THERE ARE NO DIFFERENCES IN THE DOWNSTREAM FLOW RATES BETWEEN CONGRESSIONALLY APPROVED RE-REGULATION AND REALLOCATION. FURTHER, THERE ARE VERY MINOR AND INSIGNIFICANT DIFFERENCES IN DOWNSTREAM FLOW RATES BETWEEN REALLOCATION AND PRESENT OPERATING POLICY. MOST OPPOSITION IS BASED ON THE PERCEPTION OF CHANGE TO THE DETRIMENT OF INTERESTED PARTIES.

ALTHOUGH MINIMAL, THE GREATEST IMPACTS WILL BE UPSTREAM AT LAKE LANIER WHERE IN SEVER DROUGHT CONDITIONS SUCH AS IN 1988, THE LAKE COULD BE AS MUCH AS 5-10 FEET LOWER. HOWEVER, THE PAC STUDY FAILED TO CONSIDER DEMAND MANAGEMENT PRACTICES WHICH ARE NOW IN PLACE AND COULD EASILY CUT 20-30% USAGE IN SUCH EXTREME CASES.

PRIOR TO THE FILING OF THE SUIT, GOVERNOR HARRIS HAS INITIATED AN EFFORT TO RESOLVE INTRA-STATE CONFLICTS UNDER THE LEADERSHIP OF JOEL COWAN, HIS CHIEF OF STAFF. THIS EFFORT, CALLED THE QUALITY GROWTH PARTNERSHIP (QGP), IS AN OUTGROWTH OF THE GOVERNOR'S GROWTH STRATEGIES COMMISSION. QGP WOULD PROVIDE THE FORUM AND PROCESS FOR BRINGING ALL INTERESTS TO BEAR ON THE ISSUE WHILE SEEKING A RESOLUTION TO DIFFERENCES. QGP HAS ASKED FOUR INTEREST GROUPS (THE BUSINESS COUNCIL OF GEORGIA, THE ASSOCIATION OF COUNTY COMMISSIONERS OF GEORGIA, THE GEORGIA MUNICIPAL ASSOCIATION AND THE GEORGIA CONSERVANCY) TO APPOINT THREE REPRESENTATIVES EACH TO A PANEL TO ESTABLISH THE PROCESS FOR EDUCATING, HEARING AND BALANCING THE INTERESTS WITHIN THE STATE.

IT APPEARS THAT ENVIRONMENTAL AND ECONOMIC STUDIES HAVE DETERMINED REALLOCATION TO BE THE PREFERRED ALTERNATIVE. THE DECISION THAT REALLOCATION IS THE BEST COURSE TO TAKE HAS BEEN MADE. IT IS NOW TIME TO MOVE ON, BEFORE MORATORIA HAVE A DEVASTATING EFFECT ON THE ECONOMY. THERE IS NOT ENOUGH TIME TO BUILD A RE-REGULATION DAM OR ANY OTHER DAM TO SUPPLY THE MUCH NEEDED WATER. WE ONLY ASK CONGRESS TO RESPOND TO WELL-CONSIDERED RECOMMENDATION AND REALLOCATE THE WATER IN LAKE LANIER TO WATER SUPPLY.

WITHOUT APPROPRIATE ACTION, ATLANTA COULD EXPERIENCE A REDUCTION IN FUTURE JOBS AND POPULATION. THIS TRANSLATES INTO LARGE LOSSES IN WAGES EARNED IN BOTH THE REGION AND THE STATE, AND IN GROSS REVENUE COLLECTED BY THE STATE. BETWEEN 1995 AND 2010, WAGES PAYED TO GEORGIA RESIDENTS WOULD BE $127 BILLION LOWER UNDER THE LOW-GROWTH SCENARIO THAN UNDER THE CURRENT FORECAST. ACCORDING TO THE ATLANTA REGIONAL COMMISSION, MORE THAN 85 PERCENT OF THIS LOSS ($108 BILLION) WOULD ACCRUE IN THE SEVEN ATLANTA REGION COUNTIES. AS A RESULT, GROSS REVENUES TO THE STATE OF GEORGIA WOULD BE REDUCED BY MORE THAN $8.2 BILLION OVER THE FIFTEEN YEAR PERIOD. THE PROBLEMS THAT FACE US IN THE VERY NEAR FUTURE ARE PREVENTABLE. DECISION MAKERS MUST TAKE THE STEPS NECESSARY TO INSURE THAT THE PROBLEMS BROUGHT ON THROUGH LACK OF WATER ARE AVOIDED.

NOW ONTO THE LONG-TERM NEEDS OF THE METROPOLITAN ATLANTA AREA. AN INTER-STATE WATER MANAGEMENT PLAN IS NEEDED TO PROVIDE AN EQUITABLE AND EFFICIENT SUPPLY OF WATER TO THE SOUTHEAST. SEVERAL ELEMENTS MUST BE TAKEN INTO CONSIDERATION WHEN FORMULATING THIS PLAN.

THE FIRST ELEMENT, MAXIMIZE AND PROTECT EXISTING WATER SUPPLY, IS CRITICAL IN SECURING AN ADEQUATE WATER SUPPLY. AS STATED EARLIER, A MAJOR THEME OF THIS ELEMENT ARE STEPS SUCH AS THE REALLOCATION OF LAKE LANIER AT ALL FEDERAL DAM PROJECTS. AS NEW TECHNOLOGIES DEVELOP IN ENERGY SUPPLY, MORE OF THE WATER CURRENTLY USED FOR HYDROELECTRIC POWER GENERATION COULD BE USED FOR WATER SUPPLY. ANOTHER MAJOR THEME OF THE EXISTING WATER SUPPLY ELEMENT SHOULD FOCUS ON THE PROTECTION OF WATERSHEDS, WETLANDS AND GROUNDWATER.

A SECOND ELEMENT OF A WATER MANAGEMENT PLAN SHOULD MAKE PROVISIONS FOR REGIONAL RESERVOIRS. THE HYDROLOGIC CONSTRAINTS OF THE UPPER CHATTAHOOCHEE-FLINT RIVER BASIN NECESSITATES THE USE OF SURFACE WATER. WATER FROM THE CHATTAHOOCHEE RIVER CAN ONLY SERVE METRO ATLANTA'S NEEDS TO 2010. GEORGIA MUST LOOK TO THE REGIONAL RESERVOIR SYSTEM TO PROVIDE THE NEEDED WATER TO THE YEAR 2050.

THE LAST AND PERHAPS MOST IMPORTANT ELEMENT IS CONSERVATION. THE DEMAND FOR WATER MUST BE ADDRESSED IN ADDITION TO THE SUPPLY OF OUR PRECIOUS RESOURCE. TODAY, IN METRO ATLANTA, LOCAL GOVERNMENTS EMPLOY A NUMBER OF PROGRAMS TO REDUCE DEMAND. BUT, MUCH MORE NEEDS TO BE DONE, AND COMMITMENT TO CONSERVING WATER IS EVIDENT THROUGHOUT THE REGION.

IN CONCLUSION, THE FATE OF THE ATLANTA REGION RESTS IN LARGE PART ON THE HANDS OF CONGRESS. IT IS UP TO US TO CONSERVE AND MANAGE THE WATER THAT WE CURRENTLY RECEIVE. THE PROTECTION OF OUR FUTURE WATER AND OUR VERY LIVELIHOOD IS YOURS. WE ARE HOPEFUL THAT YOU WILL MAKE PRUDENT AND NECESSARY DECISIONS.

Comments on behalf of

Governor Guy Hunt
State of Alabama

Before

The Subcommittee on Water Resources
Committee on Public Works and Transportation
United States House of Representatives

Field Hearings

Decatur, Georgia
September 28, 1990

and

Tallahassee, Florida
September 29, 1990

Presented by: Dr. Don C. Hines
and
Mr. Walter B. Stevenson, Jr.

Alabama Department of Economic
and Community Affairs
Post Office Box 250347
Montgomery, Alabama 36125-0347

Mr. Chairman and members of the Subcommittee.

It is my pleasure to appear before the Subcommittee on Water Resources representing Governor Guy Hunt and have the opportunity to assist in creating a better understanding of Alabama's perspectives regarding regional-interstate water resource issues impacting Georgia, Florida and Alabama.

The Subcommittee's present concerns center around the Army Corps of Engineers proposals to reallocate water storage at various federal projects, located on interstate streams, for exclusive use in Georgia. Let me begin by assuring the Subcommittee that it is not Alabama's intent to hinder the use of interstate streams by any entity for beneficial uses, but to: a) assure that downstream users and interests, including southern parts of Georgia, Florida and specifically Alabama, receive equitable access to and distribution of these same finite water resources; and b) to protect current and future economic and environmental interests. Because the proposed reallocations involve a huge quantity of water -- 106% of the amount the entire State of Alabama used for public water supply in 1989 -- they must be properly analyzed and evaluated.

The proposed reallocations of water storage at Lake Lanier in the Chattahoochee-Apalachicola River Basin and at both Carters Lake and Lake Allatoona in the Alabama-Coosa River Basin all concern federal reservoirs which were designed as integral parts of total river systems and are located in the headwaters of interstate rivers. These three federal projects were designed as integral parts of total river systems to support specific purposes which were approved by Congress. The Congress also approved construction financing for the projects and continues to support these project purposes today by funding their operations and maintenance. The reallocations would modify the original Congressionally authorized, primary project purposes at all three federal reservoirs. The Corps of Engineers, even with these and other Federal projects on both river systems, have historically had problems operating the river systems to meet their Congressionally approved purposes. This has been primarily due to the lack of adequate water and/or flows to support the authorized and funded purposes of the river systems.

The reservoirs, with their corresponding reallocations, are located in the head waters of interstate streams flowing from Georgia to Alabama and Florida. The reservoirs contain significant portions of the total storage in each basin. This storage is vital to the respective river systems.

Reservoirs provide support for the Congressionally authorized purposes, such as navigation, hydropower production and the augmentation of downstream flows necessary to ensure the economic and environmental well-being of the entire basins when normal flows are insufficient.

The Army Corps of Engineers has undertaken studies of the proposed reallocations. The Corps has released draft studies for Lake Lanier and Carters Lake for public review and comment, but has not yet released the draft study on Lake Allatoona. The State of Alabama has filed substantial comments regarding the draft reports and the lack of corresponding, full environmental impact statements for Lake Lanier and Carters Lake. I have previously provided copies of our written comments to the Subcommittee and I now reiterate my request that Alabama's comments on these studies be made a part of this Subcommittee's records.

Alabama's comments addressed issues such as: a) the failure to consider downstream interests, b) a lack of comprehensive water resources planning for all water uses for an appropriate time period, and use of a planning and review process which failed to meet the Corps of Engineers internal requirements and the National Environmental Policy Act. Alabama continues to contend that insufficient, reliable data is available upon which to base prudent, interstate water resource decisions at this time. That is why Alabama continues to support the proposed interstate comprehensive plan that will assess the cumulative impact of the proposed reallocations. This comprehensive plan should also assess the impacts on the basins as a whole and survey the water resource needs of Alabama, Florida and Georgia in light of the limited resources available. To date Georgia has failed to indicate they will participate in this process. Alabama has initiated a water resources planning and management study that will provide guidance for our input to the comprehensive plan.

Without such comprehensive and reliable data any actions would be premature and result in perpetual, irrevocable harm to downstream economic and environmental interests and the users of these interstate water resources -- not only in Alabama and Florida, but also in south Georgia. Alabama believes its requests are reasonable and capable of substantiation to the point that the State has filed suit against the Corps of Engineers in the United States District Court. I am requesting that the copy of the complaint filed by the State of Alabama, and previously made available to the Subcommittee, also be made a part of your records.

I hope that the Subcommittee reviews Alabama's written comments regarding the proposed reallocations in detail and concurs that the data available is not comprehensive and uniformly accepted by the States as reliable. Given these circumstances, any attempts, at this time, to base Congressional action or approval of the proposed reallocations on the existing limited data and analysis should be deferred to avoid serious conflicts with existing Federal mandates, including the National Environmental Policy Act. I also hope that the Subcommittee agrees that the course of action presently being followed to address these regional-interstate water issues is just and that it will result in a local and equitable resolution of the current interstate water resource issues impacting Georgia, Florida and Alabama.

If the Subcommittee needs any additional information or further details, our office, on behalf of the Governor, will be happy to respond. I thank you for your attention and time.

20 September 1990

TESTIMONY TO

SUBCOMMITTEE ON WATER RESOURCES
OF THE
COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION

DECATUR, GEORGIA
28 SEPTEMBER 1990

BY

COLONEL MICHAEL F. THUSS
U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT

I appreciate the opportunity to appear before this Subcommittee today representing the Secretary of the Army. I will provide testimony on the efforts of the U.S. Army Corps of Engineers (Corps) in evaluating and addressing the current and future water supply needs of the Atlanta region. In order to place the Corps' involvement in water supply into perspective, I will give you a short history of water resources developments in the Apalachicola-Chattahoochee-Flint (ACF) Basin. Then I will bring you up-to-date on the reallocation proposals by the Corps to address water supply needs in the basin.

The Corps has long been involved with the planning and implementation of water resources projects in the ACF Basin. The first published Corps report on recommended improvements in the basin was for navigation on the Apalachicola River in 1872. This was followed by many other reports for shallow draft navigation.

Section 1 of the River and Harbor Act of 1927 authorized surveys for the comprehensive development of the water resources of selected river basins in the United States, including the Apalachicola River and its tributaries. This gave rise to the first published report on the basin of a comprehensive nature which was submitted to Congress on June 16, 1939. This report, which was published as House Document No. 342, 76th Congress, 1st Session, recommended approval of a general plan for the full development of the ACF River system for the following purposes: flood control, navigation and hydroelectric power. Specific improvements were authorized later by the 1945 and 1946 River and Harbor Acts and the Flood Control Acts of 1962 and 1963.

Jim Woodruff Lock and Dam was completed in 1957 for the purposes of navigation and hydropower. Buford Dam was completed in 1958 for the purposes of navigation, hydropower, flood control, water supply and water quality. The Walter F. George project was completed in 1963 for navigation and hydropower purposes. The George W. Andrews project was also completed in 1963 for the purpose of navigation. West Point Dam was added in 1975 for the purposes of navigation, hydropower, flood control, recreation, and fish and wildlife. Recreation is also considered a project purpose at each of the other projects by virtue of the Flood Control Act of 1944, the Federal Water Project Recreation Act (Public Law 89-72), and the recreational developments that have been constructed. In addition, fish and wildlife management is considered a project purpose at the Buford and Walter F. George projects.

Two important laws have been passed which are the basis for the Corps' involvement in evaluating and meeting the water supply needs of the Atlanta region. The first law was the 1944 Flood Control Act which authorizes disposal of surplus water available at Federal reservoirs for domestic and industrial uses. Surplus water is defined as water that is excess to the requirements of the authorized project purposes. The second important law was Section 301 of the River and Harbor and Flood Control Act of 1958 (also known as the Water Supply Act of 1958) which provided that storage may be included in Federal reservoirs for present and future municipal or industrial water supply. However, modification of existing projects for water supply that would significantly affect project operations or existing project purposes would require further Congressional authorization, such as the proposed reallocation for Lake Sidney Lanier.

House Document 300, 80th Congress, the basis for Congressionally authorized development of the ACF Basin, also outlined the need for a dependable water supply for the Atlanta region as a prerequisite for economic growth. During the early 1940's, civic leaders for the City of Atlanta strongly urged that the 1946 River and Harbor Act authorize the construction of one or more reservoirs upstream of

Atlanta in order to meet a threatened shortage of water for municipal and industrial purposes during low-flow periods. A multipurpose headwater reservoir was also needed for the economical operation of the proposed developments below Columbus by providing flow regulation during low-flow periods. The approval of the Buford Dam site accomplished both of these needs. Operation of Buford Dam has greatly augmented the minimum flow in the Chattahoochee River at Atlanta, thereby producing considerable benefits by reinforcing and safeguarding the water supply of the metropolitan area.

In the early 1970's, officials for the State of Georgia and the Atlanta Regional Commission recognized that the population and economic growth experienced by the Atlanta region could not be maintained or continued without additional provisions for dependable water supply in the future. The Senate Public Works Committee on March 2, 1972, authorized the Metropolitan Atlanta Area Water Resources Management Study (MAAWRMS). The purpose of this study was to develop a framework plan for the orderly development of the water and related land resources for the Metropolitan Atlanta area to beyond the year 2000. The main concerns dealt with wastewater management and water supply, but flood damage reduction planning, water oriented recreation, and environmental impacts were also considered. The Corps' Savannah District, conducted the MAAWRMS with the aid of an ad hoc Executive Group consisting of representatives of the Corps, the Atlanta

Regional Commission, Georgia Department of Natural Resources, the U.S. Environmental Protection Agency, and later the Georgia Mountains Area Planning and Development Commission. This group evaluated the water supply needs of the region and began formulating a long-range water supply plan including a detailed evaluation of the technical, economic, and environmental impacts of the most feasible alternatives. Over fifty different alternative water supply source plans, within and outside the region, were considered for meeting the area's water supply needs. From these alternative source plans the Executive Group recommended the plan, previously adopted by the Atlanta Regional Commission for Metropolitan Atlanta, that would meet 89 percent of estimated long range water supply needs from Lake Lanier and the Chattahoochee River.

In September 1978, an interim report on the MAAWRMS was completed. Based on the recommended water supply source plan four site specific alternatives were recommended for further study. These alternatives were:

1. Construct a reregulation facility downstream from Buford Dam.
2. Raise the normal summer pool elevation of Lake Lanier above 1071 and make additional weekend releases.
3. Increase the storage capacity of Morgan Falls Reservoir.
4. Redistribute week-day peak power releases from Buford Dam to off-peak periods on the weekend (Reallocation of Storage).

In 1981, a draft feasibility report for the MAAWRMS was coordinated with the agencies and public for comment. This report evaluated three final alternatives in comparable detail. The alternatives were:

1. Construct a reregulation dam downstream of Buford Dam.
2. Reallocate storage in Lake Lanier from hydropower to water supply.
3. Dredge Morgan Falls Reservoir to increase storage capacity.

The final MAAWRMS feasibility report and Environmental Impact Statement were approved by the Chief of Engineers in June 1982, and recommended the reregulation dam for construction since it was the plan that had the maximum net benefits to the nation. This report further recommended additional studies to address the impacts of the reregulation dam on water quality in the river, the Buford Trout Hatchery, and other unresolved issues. The Governor of Georgia and the Georgia Department of Natural Resources supported these recommendations. The Assistant Secretary of the Army for Civil Works reported to the Congress in January 1985 that the reregulation dam was feasible, but he recommended that the project be constructed by non-Federal interests. The final report was not transmitted to the Congress since no Federal action was required; however, Congress authorized the construction of the reregulation dam in Section 601 of the Water Resources Development Act of 1986 (P.L. 99-662), subject to the preparation of a General

Design Memorandum (GDM) and a supplemental EIS, and approval by the Secretary of Army and the Governor of Georgia.

Savannah District submitted the draft GDM and draft supplemental EIS to the South Atlantic Division office in March 1988. The investigations indicated that the net national economic development benefits of the reregulation dam and reallocation of storage alternatives were nearly equal. Consequently, it was decided that additional analyses should be performed. In October 1988, a revised GDM was submitted to the South Atlantic Division office recommending reallocation of storage at Lake Lanier as the most economical alternative for meeting the future water supply needs for the Atlanta region. The final GDM and draft supplemental EIS on the reregulation dam were submitted to the Chief of Engineers on November 25, 1988. The Governor of Georgia, Georgia Department of Natural Resources, and the Atlanta Regional Commission agreed that reallocation represented the preferred option. This change in the recommended alternative necessitated additional analyses and preparation of a Post Authorization Change (PAC) Report to support the reallocation recommendation.

In March 1989, the Mobile District began preparation of the PAC Notification Report to refine the future water supply needs for the Atlanta region to the year 2010. This report evaluated the storage that would have to be reallocated from hydropower to water supply at Lake Lanier to satisfy these projected demands. The report also identified the associated impacts to all the project purposes, both upstream and downstream of Buford Dam. A draft PAC Report was coordinated with the agencies and public in Alabama, Florida, and Georgia in November 1989. This report included a proposed Water Control Plan (WCP) that had been developed to guide the management decisions for operating the Federal projects in the ACF Basin during all hydrologic conditions. This PAC Report also contained a draft Environmental Assessment that addressed the expected impacts of reallocation on the various resources in the basin. The report tentatively recommended the reallocation of 207,000 acre-feet (AF) of storage (141,700 AF for upstream users and 65,300 AF for downstream users) to meet the projected 529.4 million gallons per day (MGD) demand in the year 2010 (151.0 MGD for upstream users and 378.4 MGD for downstream users). The draft EA concluded that the overall impacts to lake levels and downstream flows needed to support navigation and meet State water quality standards would be minor.

The State of Florida has expressed concern over the timing and volume of flows released from Jim Woodruff Dam. These flows are critical to maintaining the ecological productivity and diversity of the Apalachicola River and Apalachicola Bay. The Corps has placed particular emphasis on determining the effects of the WCP and the increased demands for water supply in the Atlanta region on the discharges from Jim Woodruff Dam. The impacts of the Lake Lanier reallocation on the current minimum release of 5,000-7,500 CFS were evaluated, and no significant adverse impacts to the environment would be expected.

Eight public meetings were held throughout the basin from November 15-21, 1989. Numerous statements and comments were received. The majority of these comments were concerned about the potential impacts to lake levels in Lake Lanier and the recreation industry; potential impacts to flows downstream and associated impacts to water quality, water supply, fish and wildlife, power production, and navigation; and the need to address cumulative impacts of reallocations by the preparation of an EIS.

The numerous letters, telephone calls and meetings since the public meetings with representatives of the States of Alabama, Florida and Georgia, and the general public, have been utilized in an attempt to further explain and coordinate the findings in the draft PAC Report. Special emphasis has been placed on sharing and explaining the WCP model and the expected condition of lake levels and flows in the future should a drought as severe as the 1986-88 drought reoccur. Efforts have also been made to help the states resolve underlying water rights issues related to providing additional water supply from the Chattahoochee River.

In addition to our efforts at Lake Lanier, the Corps is evaluating the need to reallocate storage for water supply purposes from Allatoona and Carters Lakes to meet short-term water supply needs. These needs are 38.5 MGD from Allatoona Lake and 2 MGD from Carters Lake. The Carters Lake Reallocation Report has been coordinated with the agencies and public, and has been forwarded to the Office of the Chief of Engineers for approval. An executive summary of the Lake Allatoona report was coordinated with the agencies and public in October 1989. The report is currently being revised to address agency and public concerns.

In an effort to resolve concerns regarding downstream cumulative impacts which may result from these and future water needs downstream of Atlanta the Army is undertaking a comprehensive study of the future water supply and other water resource needs in the ACF and Alabama-Coosa River Systems. We anticipate that the comprehensive study will provide an opportunity for the states to address water rights issues and to address the cumulative impacts on fish and wildlife habitat.

Regarding water supply contracts for actual use of water, Lake Lanier has been used for water supply from the day it became fully operational in 1958. Contracts with the Cities of Gainesville and Buford, Georgia, were entered into on June 22, 1953 and December 19, 1955, respectively, for 8 and 2 MGD, respectively. The contracts were necessary because these entities used the Chattahoochee River as a source of water supply prior to its impoundment. Interim withdrawal contracts for the right to use water from Lake Lanier have also been entered into with Gwinnett County in 1973, 1974, 1985, and 1988 (average 53 MGD per annum); City of Cumming in 1978, 1985, and 1988 (average 10 MGD per annum); the City of Gainesville in 1987 (average 20 MGD per annum or an additional 12 MGD to the original contract); and Atlanta Regional Commission in 1986 (377 MGD peak day withdrawal from the Chattahoochee River). These interim contracts, which expired on December 31, 1989, did not guarantee permanent use of the water, but were entered into as a means to permit water supply withdrawals until permanent storage contracts could be accomplished. These interim contracts allowed the entities to withdraw a specified amount of water per day.

Since the interim water withdrawal contracts expired on December 31, 1989, the Corps has proposed that new interim water supply contracts be signed to provide similar water supply amounts for these entities until formal storage contracts can be implemented. The processing of these new contracts along with the proposed reallocations at Lake Lanier, Allatoona Lake and Carters Lake is the subject of a lawsuit filed by the State of Alabama on June 28, 1990. We are currently working with the States and the Department of Justice to develop a Memorandum of Understanding which, if acceptable to all parties, would guide the processing of these contracts in the future.

In summary, the Corps has tried to be responsive to the water supply needs of the Atlanta region within existing authorities while maintaining a balance with other project purposes upstream and downstream of Buford Dam. There are many issues facing us today. I believe the Comprehensive Study provides a unique opportunity to address these issues in a proactive, responsible manner while evaluating the long-range water needs of the basins and that real progress can be made toward basinwide water management through this study.

I again appreciate the opportunity to testify before the Subcommittee on Water Resources. Members of my staff and I stand ready to answer any questions you may have regarding the issue of reallocation.

STATEMENT OF
BILLY G. TURNER - PRESIDENT
COLUMBUS WATER WORKS
FOR THE
BOARD OF WATER COMMISSIONERS
COLUMBUS, GEORGIA
BEFORE
THE SUBCOMMITTEE ON WATER RESOURCES
OF THE
COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION
U. S. HOUSE OF REPRESENTATIVES
CONCERNING
LONG-TERM WATER SUPPLY NEEDS OF THE ATLANTA REGION FROM APALACHICOLA-CHATTAHOOCHEE-FLINT RIVER BASIN

MANUEL MALOFF CENTER
1300 COMMERCE DRIVE
DECATUR, GEORGIA

SEPTEMBER 28, 1990

COLUMBUS, THE SECOND LARGEST CITY IN GEORGIA, WAS A COMMUNITY FOUNDED IN THE EARLY 1800'S BECAUSE OF THE CHATTAHOOCHEE RIVER. COLUMBUS IS A WATER WORKS TOWN SITUATED ON THE GEORGIA-ALABAMA BORDER APPROXIMATELY MID-WAY OF THE STATE AND ADJACENT TO PHENIX CITY, ALABAMA. COLUMBUS EXISTS TODAY BECAUSE OF THE UNIQUE FEATURES OF THE RIVER WHERE IT CROSSED THE FALL LINE CREATING LARGE ELEVATION CHANGES AND WATER FALLS THAT MADE IT IMPOSSIBLE TO PASS BY BOAT. INDIANS SETTLED HERE IN THE EARLY YEARS AND, SOME OF THE FIRST MANUFACTURING OPERATIONS LOCATED ALONG THE RIVER TO TAKE ADVANTAGE OF THE WATER POWER GENERATED BY THE FALLS. IN 1902, A DAM WAS BUILT AND THE LAKE WAS CREATED TO HARNESS THE POWER OF THE FALLS AND THE RIVER TO PRODUCE HYDRO POWER. IT IS INTERESTING THAT THE BOARD OF WATER COMMISSIONERS OF COLUMBUS WAS FORMED IN 1903 TO PROVIDE FOR A PUBLIC WATER SYSTEM. THE BOARD, MORE COMMONLY CALLED THE WATER WORKS, IS TODAY A PART OF THE FIRST AND ONLY CONSOLIDATED CITY-COUNTY GOVERNMENT IN GEORGIA. IT IS THE ORGANIZATION WITH THE RESPONSIBILITY AND AUTHORITY TO PROVIDE WATER SUPPLY AND WASTEWATER DISPOSAL SERVICES FOR ITS CITIZENS.

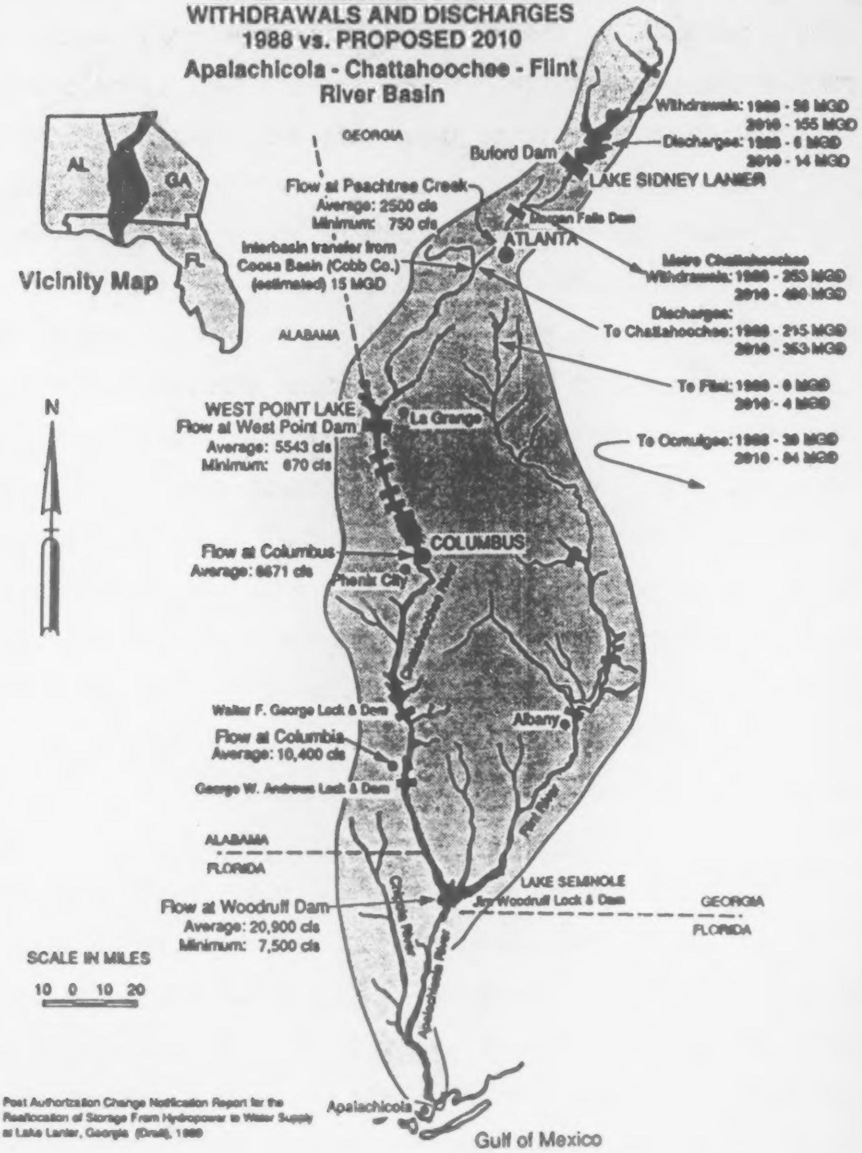
LAST YEAR MARKED 150 YEARS SINCE THE CITIZENS OF COLUMBUS CALLED FOR A COMMUNITY WATER SYSTEM. THE CURRENT WATER PLANT INTAKE WAS CONSTRUCTED ON THE CHATTAHOOCHEE RIVER IN 1913 AND HAS BEEN AWARDED THE AMERICAN WATER LANDMARK AWARD RECOGNIZING ITS MORE THAN 50 YEARS OF CONTINUOUS SERVICE.

THERE ARE MANY NEEDS TO WHICH THE CHATTAHOOCHEE RIVER MUST RESPOND. AMONG THE MANY IMPORTANT USES ARE: RECREATION, NAVIGATION, POWER PRODUCTION, FLOOD CONTROL, DRINKING WATER SUPPLY AND INDUSTRIAL WATER SUPPLY. HOWEVER, THE MORE CRITICAL NEED OF THE RIVER THAT TRANSCENDS MOST OF THESE USES IS THE MAINTENANCE OF WATER QUALITY. EACH OF THESE STATED USES ARE IMPACTED BY THE WATER QUALITY AVAILABLE. WATER QUALITY, AT ANY GIVEN LOCATION, IS A RATHER COMPLICATED ISSUE GIVEN THE PRESENCE OF VARYING WASTEWATER DISCHARGES, WATER WITHDRAWALS, RESERVOIRS, POWER RELEASES, ETC. WATER QUALITY IS FURTHER COMPLICATED BY THE NATURAL BIOLOGICAL PROCESSES THAT TAKE PLACE IN THE RIVER. THESE RANGE FROM THE VERY DESIRABLE FISH PRODUCTION FOR ONE OF THE FINEST BASS LAKES IN THE WORLD IN LAKE EUFAULA TO ESTHETICALLY UNDESIRABLE ALGAE BLOOMS IN WEST POINT LAKE. EACH OF THESE DEPEND ON A NOT SO WELL UNDERSTOOD DELICATE BALANCE OF WATER QUALITY CHARACTERISTICS.

IT SEEMS TO US THAT IT IS ON THESE DELICATE BALANCES THAT WE SHOULD BE CONCENTRATING MORE OF OUR ENERGY, OUR EFFORTS AND OUR ECONOMICS. THE ENTIRE RIVER SYSTEM, AS SHOWN IN FIGURE 1, IS COMPLEX IN THAT IT CONTAINS MANY POINTS OF WITHDRAWAL AND DISCHARGE AND MANY STRUCTURES WHICH CONTROL ITS FLOW. LAST YEAR THE CORP OF ENGINEERS PRESENTED A "POST AUTHORIZATION CHANGE NOTIFICATION REPORT" AT A SERIES OF PUBLIC HEARINGS. THIS REPORT PROVIDED NOT ONLY FOR REALLOCATION OF STORAGE FROM HYDROPOWER TO WATER SUPPLY

LAKE LANIER REALLOCATION WITHDRAWALS AND DISCHARGES 1988 vs. PROPOSED 2010

Apalachicola - Chattahoochee - Flint River Basin



Source: Post Authorization Change Notification Report for the Reallocation of Storage From Hydropower to Water Supply at Lake Lanier, Georgia (Draft), 1989

AT LAKE LANIER BUT ALSO FOR A WATER CONTROL PLAN THAT GAVE LITTLE, IF ANY, CONSIDERATION TO POTENTIAL DOWNSTREAM WATER USES.

WE BELIEVE THE WATER CONTROL PLAN OF THE CHATTAHOOCHEE-FLINT-APALACHICOLA RIVER SYSTEM SHOULD HAVE AS ITS FOUNDATION AND NOT JUST A BY CHANCE OCCURRENCE, AN OVERALL PLAN FOR MAINTENANCE OF WATER QUALITY. GIVEN THE SYSTEM CONFIGURATION AND ITS HISTORICAL PERFORMANCE EVEN IN SEVERE DROUGHT CONDITIONS, WE BELIEVE THE ELEMENTS EXIST FOR THE DEVELOPMENT OF A WATER QUALITY PLAN UPON WHICH ALL USERS OF THE RIVER CAN DEPEND AND PLAN ON FOR THE FUTURE.

THE BASIS FOR THIS WATER QUALITY PLAN MUST BE ESTABLISHED ON THE SOLID FOUNDATION OF A SUSTAINED MINIMUM FLOW. FROM THIS SUSTAINED MINIMUM FLOW COMMITTED TO IN THE WATER CONTROL PLAN EACH RIVER USER CAN BE REQUIRED AND ASSURED BY THEIR RESPECTIVE STATE WATER SUPPLY AND/OR WATER QUALITY AGENCY THAT THEIR WATER SUPPLY WITHDRAWAL AND WASTEWATER DISCHARGE WILL AND MUST PERFORM IN RELATION TO THAT MINIMUM FLOW.

MANY OF US, BOTH UP AND DOWNSTREAM, HAVE RAISED OUR VOICES CONCERNING THE REALLOCATION OF WATER FOR WATER SUPPLY IN ATLANTA. WHILE EXTREMELY IMPORTANT, WE'RE NOT SURE THAT THIS IS THE MOST CRITICAL ISSUE FOR THOSE OF US DOWNSTREAM FROM WEST POINT LAKE. IT MAY WELL BE THAT MOST OF THE

IMPACTS OF ATLANTA WATER USERS ARE DAMPENED BY WEST POINT LAKE. THOSE OF US DOWNSTREAM MAY ONLY BE AFFECTED NEGATIVELY BY ATLANTA'S DIVERSION AND CONSUMPTIVE WATER USERS. SO THAT IT NOT BE OVERLOOKED, LET US RE-EMPHASIZE OUR CONCERN ABOUT DIVERSION AND CONSUMPTIVE USE THAT WOULD HAVE THEIR MOST NEGATIVE IMPACT ON DOWNSTREAM USERS DURING DROUGHT SITUATIONS. AGAIN, THE FINAL PLAN SHOULD PROVIDE FOR 1.) NO DIVERSION FROM THE CHATTAHOOCHEE RIVER BASIN AND 2.) A PROGRAM TO MINIMIZE CONSUMPTIVE USE IN THE METRO ATLANTA AREA. IT SEEMS TO US THAT THE CRITICAL ISSUE FOR US DOWNSTREAM OF WEST POINT IS THE ASSURANCE OF A SUSTAINED MINIMUM DROUGHT FLOW.

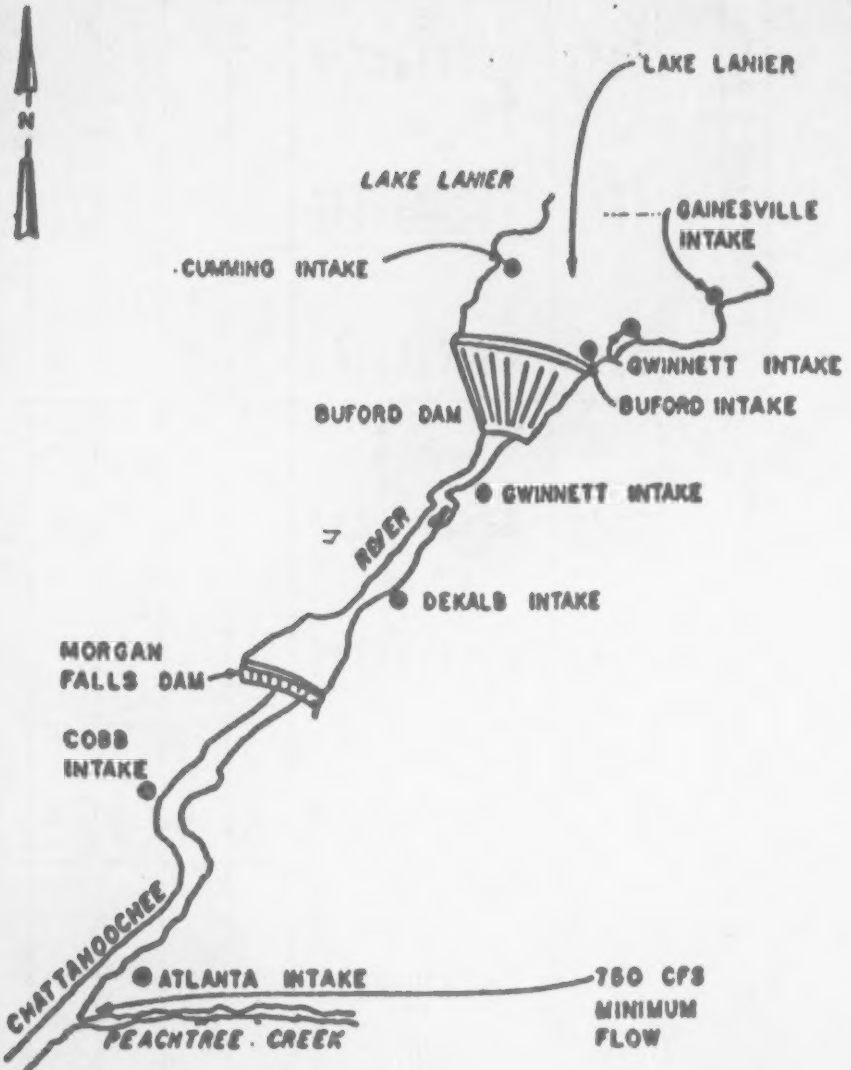
CHATTAHOOCHEE RIVER FLOWS AT THREE POINTS, ATLANTA, WEST POINT AND COLUMBUS ARE SHOWN ON TABLE I. WHILE NOT, SIGNIFICANTLY IMPACTING THE AVERAGE FLOWS, CONTROL OF THE RIVER SHOWS A SUBSTANTIAL IMPACT ON MINIMUM DAILY FLOWS. ATLANTA HAS ESSENTIALLY AN ASSURED SUSTAINED MINIMUM OF 750 CFS IN THE CHATTAHOOCHEE RIVER AT PEACHTREE CREEK. THIS IS AFTER WATER SUPPLY WITHDRAWALS AND BEFORE WASTEWATER RETURNS. AS SHOWN IN FIGURE 2, THE WATER AVAILABLE DOWN STREAM FROM ATLANTA DURING THE 1986 AND 1988 DROUGHT PERIODS WAS ABOUT 1,120 CFS. IT IS ESTIMATED WITH REALLOCATION THAT AN ADDITIONAL 120 CFS WILL BE PROVIDED FROM TREATED WASTEWATER BRINGING THE FLOW TO 1,240 CFS, WHICH COULD BE AVAILABLE IN THE YEAR 2010. THIS IS THE PRIMARY SOURCE OF WATER FOR INFLOW INTO WEST POINT RESERVOIR. WE BELIEVE IT

TABLE I

STREAMFLOW DATA 1980-1989
CHATTAHOOCHEE RIVER DATA SUMMARY

STATION	CHATTAHOOCHEE RIVER AT ATLANTA			CHATTAHOOCHEE RIVER AT WEST POINT			CHATTAHOOCHEE RIVER AT COLUMBUS		
DRAINAGE AREA (sq. mi)	1450			3550			4670		
YEAR	MEAN DAILY FLOW (cfs)	MAXIMUM DAILY FLOW (cfs)	MINIMUM DAILY FLOW (cfs)	MEAN DAILY FLOW (cfs)	MAXIMUM DAILY FLOW (cfs)	MINIMUM DAILY FLOW (cfs)	MEAN DAILY FLOW (cfs)	MAXIMUM DAILY FLOW (cfs)	MINIMUM DAILY FLOW (cfs)
1980	3563	13000	1120	7672	23800	770	9147	53900(03-09-80)	1280
1981	1626	5850	1080	3436	11200	740	4439	45600	1130
1982	1815	17600	1060	4280	26200	680	6135	47600	1230
1983	2829	11600	1040	6379	21800	730	8754	53100	1500
1984	3283	18100	1100	7246	26700	755	8876	33300	1050(11-13-84)
1985	1856	9910	1020	3861	12900	690	4879	34450	1060
1986	1438	14380	887	2835	14100	517(07-13-86)	3590	12700	1150
1987	1809	11300	859	4367	16400	599	6151	32200	1170
1988	1328	9920	866	2644	11200	576	3507	16600	1100
1989	1553	18900 (10-01-89)	857(02-16-89)	4060	29000(06-21-89)	619	5518	41700	1160
Average Flow 1985-1989(cfs)	1597			3553			4729		
Average Flow 1980-1989(cfs)	2110			4658			6100		
Avg.Yield 1985-1989(cfs/sq.mi)	1.101			1.001			1.013		
Avg.Yield 1980-1989(cfs/sq.mi)	1.455			1.312			1.306		

FIGURE 2



<—— Wastewater return in 1988 - 300 cfs

<—— Wastewater return in 2010 - 420 cfs

<—— Local inflow - 70 cfs

Total Flow above West Point Lake in 1988 - 1120 cfs

Total Flow above West Point Lake in 2010 - 1240 cfs

IS TECHNICALLY POSSIBLY FOR ATLANTA WITH DIRECTION FROM THE GEORGIA DEPARTMENT OF NATURAL RESOURCES TO MANAGE THE WATER QUALITY IN THAT FLOW FOR THE PROTECTION OF WEST POINT LAKE. WHILE IT MAY BE EXPENSIVE ATLANTA IS AN ECONOMICALLY VIBRANT COMMUNITY AND WITH ITS ECONOMIES OF SCALE CAN AFFORD TO PROVIDE THE HIGH LEVEL OF TREATMENT THAT IS NECESSARY AND CAN RETURN ALL OF THEIR WATER IN AN ACCEPTABLE CONDITION FOR THE DOWNSTREAM USERS.

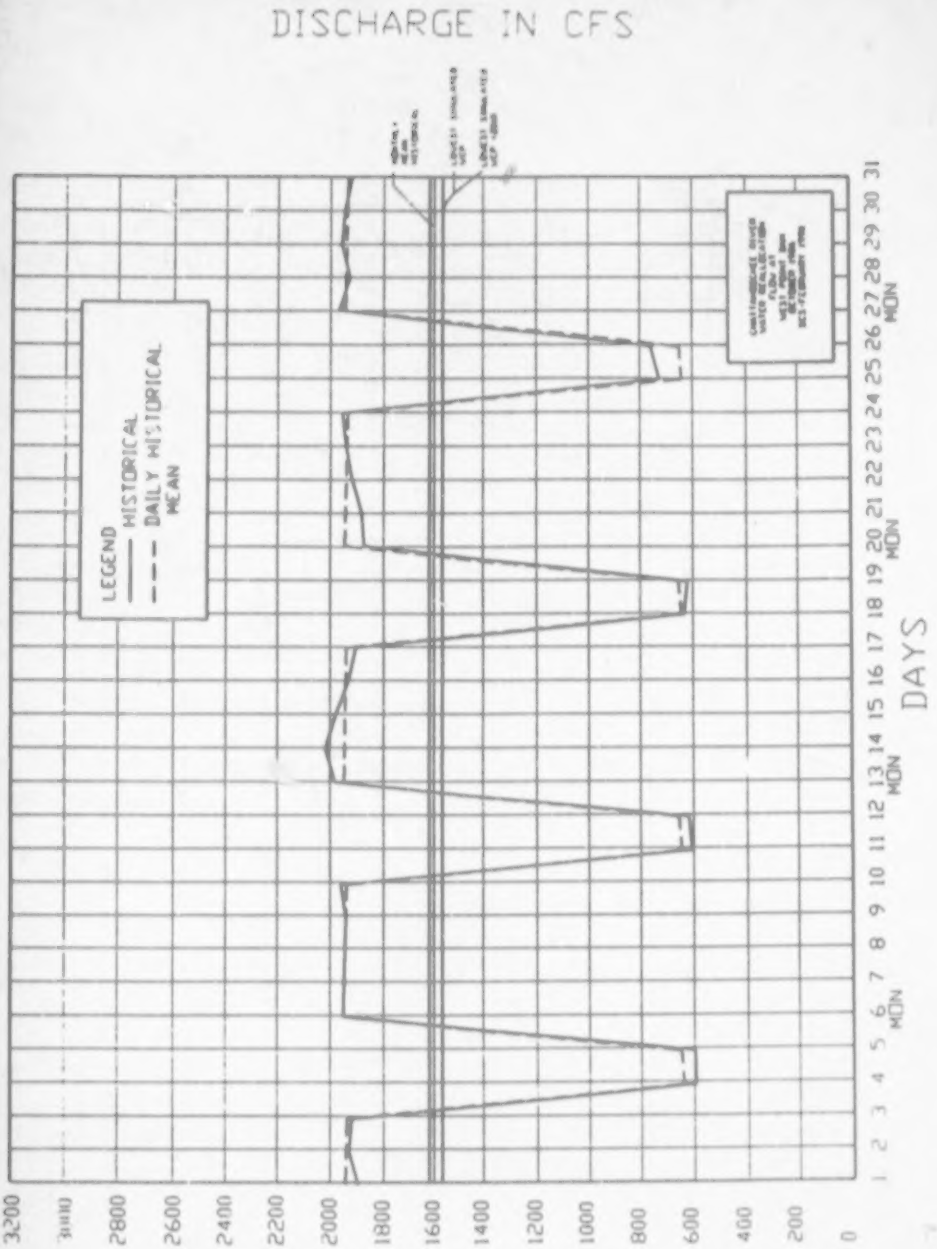
AN ESSENTIAL ISSUE IN PROVIDING A SUSTAINED MINIMUM FLOW IS THE IMPACT OF THE OPERATION OF WEST POINT RESERVOIR ON DOWNSTREAM USERS. THE POTENTIAL IMPACT ON COLUMBUS VIA CONTROL OF FLOWS AT WEST POINT DAM IS ILLUSTRATED BY TABLE II SHOWING SEVEN (7) DAY AVERAGE FLOWS WHICH IS THE FLOW NORMALLY USED BY THE STATE AND FEDERAL AGENCIES IN WATER QUALITY PLANNING. THE SUBSTANTIAL REDUCTION IN SEVEN (7) DAY FLOW AT WEST POINT, MORE THAN 400 CFS, SHOWS THE IMPACT WHICH COULD OCCUR AT COLUMBUS UNLESS THE RIVER SYSTEM IS OPERATED WITH CONCERN FOR DOWNSTREAM MINIMUM FLOW.

TABLE II
IMPACT OF WEST POINT LAKE
AVERAGE SEVEN DAY FLOWS

PERIOD	AT WEST POINT	AT COLUMBUS
PRE-WEST POINT LAKE (1960-74)	1196	1117
POST-WEST POINT LAKE 1975-89)	778	1297

FIGURE 3 SHOWS A TYPICAL RELEASE PATTERN FROM WEST POINT DAM DURING THE 1986 DROUGHT PERIODS. THIS IS A TYPICAL FIVE DAY PER WEEK POWER OPERATION AND A TWO DAY WEEKEND MINIMUM RELEASE OF ABOUT 675 CFS. THIS RELEASE IS THEN CARRIED THROUGH THE EIGHT DAMS AND RESERVOIR SYSTEMS BETWEEN WEST POINT AND COLUMBUS WITH ESSENTIALLY THE SAME CYCLES PLUS SOME LOCAL INFLOW. HOW THESE FLOWS ARE CONTINUED ON DOWNSTREAM THROUGH THE GEORGE, ANDREWS AND WOODRUFF PROJECTS ARE ILLUSTRATED BY FIGURE 4 SHOWING FLOW AT ANDREWS DAM WITH A MINIMUM TWO DAY WEEKEND FLOW OF 800 - 1,000 CFS AND A WEEK DAY FLOW AROUND 2,600 CFS.

THE POINT HERE IS THAT THESE ARE ACTUAL OPERATIONS OF THE RIVER SYSTEM DURING THE 1986 - 1988 SEVERE DROUGHT PERIOD. IT SUGGESTS LEVELS OF DROUGHT FLOWS THAT HAVE BEEN SUSTAINED AND CAN PROVIDE THE BASIS FOR WATER QUALITY PLANNING. THE REALLOCATION OF FLOWS FROM LAKE LANIER FOR ATLANTA'S WATER SUPPLY CAN IMPROVE MINIMUM FLOWS IF THE WATER CONTROL PLAN PROVIDES FOR IT. A CRITICAL POINT IS WHETHER WATER QUALITY PLANNING SHOULD BE DONE FOR THE ARTIFICIAL MINIMUM DAY OR THE AVERAGE FLOW. NORMALLY WATER QUALITY PLANS ARE BASED ON A 7-DAY, 10-YEAR MINIMUM FLOW. THE DIFFERENCE IS VERY SIGNIFICANT AS SHOWN IN THE FOLLOWING ANALYSES:


DISCHARGE IN CFS
LEGEND
HISTORICAL
DAILY HISTORICAL MEAN
3200
3000
2800
2600
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
1
2
3
4
5
6 MON
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27 MON
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31
DAYS

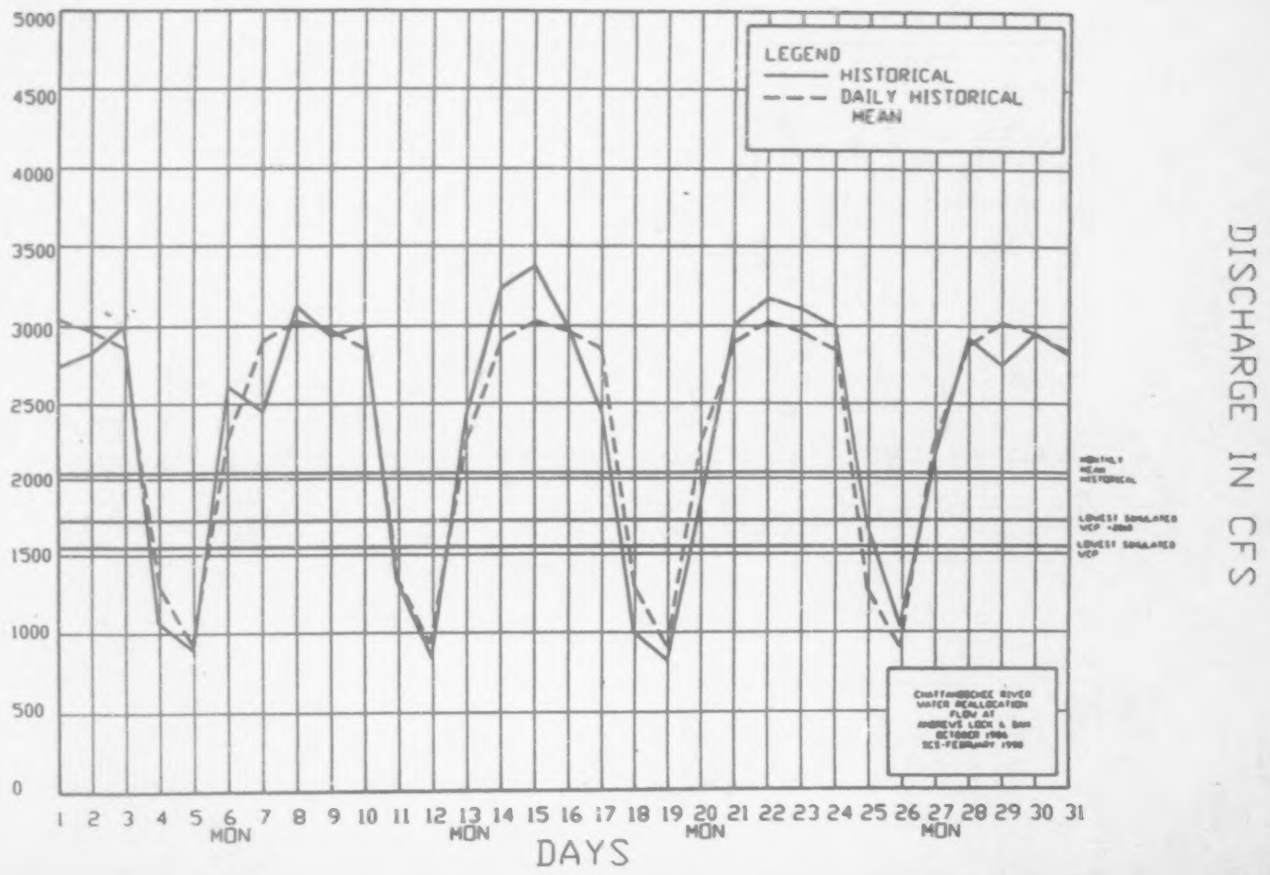
DISCHARGE IN CFS
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
MON
MON
MON
MON
DAYS
LEGEND
HISTORICAL
DAILY HISTORICAL MEAN
MONTHLY MEAN HISTORICAL
LOWEST SIMULATED WCP +[illegible]
LOWEST SIMULATED WCP
CHATTAHOOCHEE RIVER
WATER REALLOCATION
FLOW AT
ANDREWS LOCK & DAM
OCTOBER 1986
SCS-FEBRUARY 1990

TABLE III
DROUGHT FLOWS*

CHATTAHOOCHEE RIVER	DRAINAGE AREA sq. mi.	MINIMUM DAY cfs	WEEKLY AVERAGE cfs
AT PEACHTREE CREEK	1530	750	950
BELOW ATLANTA	1750	1120	1300
WEST POINT DAM	3550	675	800**
AT COLUMBUS	4670	1050	1300**
ANDREWS	8210	800	2100

*FLOWS AND DRAINAGE AREAS ARE APPROXIMATE
**POST WEST POINT DAM FLOWS

THIS TABLE ILLUSTRATES THAT STORAGE IS EFFECTIVELY USED TO PROVIDE FOR MINIMUM FLOWS IN THE UPPER PART OF THE CHATTAHOOCHEE BASIN BUT THE BENEFIT OF THIS STORAGE AND REGULATION IS LOST BELOW WEST POINT. ANOTHER WAY TO LOOK AT THIS IS TO COMPARE FLOWS ON A DRAINAGE AREA BASIN.

TABLE IV

BASIN PRODUCTION

CHATTAHOOCHEE RIVER	MINIMUM DAY cfs/sq. mi.	WEEKLY AVERAGE cfs/sq. mi.
PEACHTREE CREEK	0.5	0.6
BELOW ATLANTA	0.6	0.7
WEST POINT DAM	0.2	0.2
AT COLUMBUS	0.2	0.3
ANDREWS DAM	0.1	0.3

AS YOU CAN SEE FROM THIS TABLE, PRODUCTION PER SQUARE MILE ACTUALLY DECREASES AS YOU CONTINUE FURTHER INTO THE BASIN. THIS IS NOT TO SUGGEST THAT THE PRODUCTION PER SQUARE MILE SHOULD OR COULD BE SUSTAINED THROUGHOUT THE BASIN AT THE SAME LEVEL, BUT IT INDICATES THAT SOME IMPROVEMENT IN CONTROL OF MINIMUM DAILY AND WEEKLY FLOWS DOWNSTREAM OF ATLANTA COULD BE PROVIDED.

INFORMATION IS NOT AVAILABLE TO US NOR DOES OUR ORGANIZATION HAVE THE RESOURCES TO THOROUGHLY ANALYZE EVERY ASPECT OF THIS ISSUE. WHAT SEEMS IMPORTANT TO US IS THAT UNDER DROUGHT CONDITIONS THE WATER CONTROL PLAN SHOULD MANAGE THE RIVER TO MAXIMIZE WATER QUALITY CONTROL. TREATMENT FACILITIES HAVE AND CAN BE DESIGNED TO PROTECT WATER QUALITY FOR A SPECIFIC MINIMUM FLOW. IT IS IN THE BEST INTEREST OF THE USERS, BELOW WEST POINT, TO HAVE THAT MINIMUM FLOW IDENTIFIED AND THAT IT BE SUSTAINED AT A LEVEL THAT REFLECTS AT LEAST THE MINIMUM DAILY INFLOWS INTO WEST POINT PLUS LOCAL INFLOW FROM THE BALANCE OF THE DRAINAGE AREA. THIS BETTER IDENTIFIED AND SUSTAINED MINIMUM FLOW IS IMPORTANT TO EXISTING RIVER USERS SUCH AS THE COLUMBUS WATER WORKS AND OTHERS DOWNSTREAM AND WILL BE OF EVEN GREATER IMPORTANCE AS WE PLAN FOR THE YEAR 2010 AND BEYOND.

WE STRONGLY ENCOURAGE THIS COMMITTEE TO USE ITS CONSIDERABLE INFLUENCE TO INTERVENE IN THE WATER WARS OF ALABAMA AND GEORGIA AND TO AFFECT A SOLUTION NOT JUST

CENTERED ON A SINGLE NEED, THE WATER SUPPLY FOR ATLANTA, BUT A MUCH BROADER AND BETTER GOAL, WATER QUALITY FOR ALL THE RIVER USERS. WE BELIEVE THE COMMON INTEREST OF ALL RIVER USERS, WATER QUALITY, CAN BE POSITIVELY IMPACTED THROUGHOUT THE RIVER SYSTEM AS A PART OF REALLOCATION AT LAKE LANIER. THE COMMITMENT TO A SUSTAINED INCREASED MINIMUM FLOW FOR ALL USERS OF THE RIVER SEEMS POSSIBLE AS A PART OF THE REALLOCATION AND WATER CONTROL PLAN. A SUSTAINED MINIMUM FLOW COULD BE A KEY COMPONENT IN RESOLVING THE CONCERNS OF DOWN RIVER WATER USERS.

DEPARTMENT OF THE ARMY
MOBILE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 2288
MOBILE, ALABAMA 36628-0001

March 21, 1990

REPLY TO
ATTENTION OF:
Plan Development Section

Mr. Billy Turner
Columbus Water Works
Post Office Box 1600
Columbus, Georgia 31993

Dear Mr. Turner:

Reference is made to your letter to Mr. Kenneth Sims of my staff dated February 19, 1990, which transmitted a letter from Mr. David Word, Georgia Department of Natural Resources, dated January 19, 1990. You requested that we review the information in Mr. Word's letter regarding projected increases in downstream low flows, with full 2010 water demands being met under a reallocation scenario. You also asked how the information or similar information was utilized in the spreadsheet model to evaluate downstream impacts associated with reallocation of storage.

We have reviewed and discussed with Mr. Word the information provided. This information was essentially taken from pages B-6 and B-7 of the Post Authorization Change Report. Based on our discussions with Mr. Word, the estimated critical flow in the Chattahoochee River at the Fulton/Coweta County line in the year 2010 should have been 456 cubic feet per second (CFS) instead of 420 CFS. However, I must point out that any increase in the low flow conditions below Atlanta in the year 2010 over present conditions, due to increased wastewater discharges, does not mean that the low flows at Columbus will also increase. The low flows at Columbus are largely controlled in a weekly and monthly time scale by the release from West Point Dam. On average, these weekly and monthly West Point releases will be higher during low flow periods because of higher waste water return flows from the Atlanta region. However, there will be weeks and perhaps months in which the West Point weekly/monthly low flow release will be essentially the same as it has been in the past.

In operating under the guidelines of the Water Control Plan, we anticipate, as long as there is conservation storage in Lake Lanier and West Point Lake, that we would provide the minimum continuous release from West Point. This release is 675 CFS plus ten hours per week of peaking power generation. Because of variations in turbine outflows, this total weekly minimum release will be in the range of 1,400 to 1,600 CFS.

In summary, we do not believe that the increased low flows below Atlanta will actually result in an increase to the instantaneous and daily low flows at Columbus because any additional flows released from West Point Dam would be reregulated by the private dams located between West Point and Columbus. On the other hand, the low flows at Columbus should not be any worse due to the increased water demands through reallocation of Lake Lanier.

Regarding the development of the spreadsheet model, it was assumed that the 2010 rate of return of wastewater to the river below Atlanta would be about 67 percent of the withdrawals. This assumption is a little conservative compared to the estimated 69 percent rate of return projected by the state. By being conservative, we have actually presented a worse case scenario in the PAC Report for evaluating the impacts of reallocation to downstream low flows. Therefore, since we have projected that the low flows at Columbus would not be adversely affected with a 67 percent rate of return, they also should not be affected by a 69 percent rate of return.

If you have any questions regarding this matter, please contact me or Mr. Sims at (205) 690-2777 or (205) 690-2722, respectively.

Sincerely,

N. D. McClure IV
Chief, Planning Division

Copy Furnished:

David Word, Georgia DNR

Georgia Department of Natural Resources
205 Butler Street, S.E., Floyd Towers East, Atlanta, Georgia 30334
J. Leonard Ledbetter, Commissioner
Harold F. Reheis, Assistant Director
Environmental Protection Division

January 19, 1990

Mr. Billy G. Turner
President, Columbus Water Works
1501 13th Avenue
Post Office Box 1600
Columbus, Georgia 31994-3099

RE: Proposed Reallocation
Lake Lanier

Dear Mr. Turner:

This is to confirm the information discussed in our meeting last week.

The sole objective of the proposed reallocation of Lake Lanier is to authorize the Corps of Engineers to provide water from the lake to meet the year 2010 drinking water needs of the Atlanta area and to maintain a Chattahoochee River flow of at least 750 cfs at Peachtree Creek. You have requested information on the impacts of the reallocation during critical low-flow conditions.

A critical low-flow condition occurred in 1988 when the Corps of Engineers suspended the Buford Dam authorized hydropower generation and released water for water supply and water quality purposes only. The resultant critical Chattahoochee River flow below Atlanta (at the Fulton/Coweta line) is estimated below:

°Minimum flow (Peachtree Creek)	750 cfs
°Tributary flow	70 cfs
°Wastewater discharges	300 cfs
	1120 cfs

If the proposed reallocation is implemented, the Corps of Engineers will release more water during drought periods to meet the year 2010 water demands and to support the 750 cfs water quality flow requirement. The estimated critical Chattahoochee River flow under this condition is shown as follows:

°Minimum flow (Peachtree Creek)	750 cfs
°Tributary flow	70 cfs
°Wastewater discharges	420 cfs
	1240 cfs

The year 2010 critical flows of the Chattahoochee River below Atlanta will slightly increase if the proposed reallocation is implemented. This will also occur if the Congressionally authorized reregulation dam is constructed. This conclusion is contained in the draft Post Authorization Change Report prepared by the U.S. Army Corps of Engineers.

The Georgia Department of Natural Resources supports the proposed reallocation of approximately twenty percent of the hydropower pool of Lake Lanier. The reallocation has less overall environmental impacts than the reregulation dam and the identical insignificant downstream river flow impacts.

Please contact me if you need additional information on this issue.

Sincerely,

David M. Word, P.E.
Chief
Water Resources Management Branch

DMW:bb

cc: David Ashley

Newton County
Board of Commissioners
1113 USHER STREET, N.E.
COVINGTON, GEORGIA 30209
TELEPHONE 784-2000

ROY VARNER
CHAIRMAN

KENNETH BANKS
DISTRICT 1
FRANKLIN GRAY
DISTRICT 2
SUSETTE MONK
DISTRICT 3
HAROLD COBB
DISTRICT 4
BILLY SMITH
DISTRICT 5

September 25, 1990

MEMO

To: Committee on Public Works
Subcommittee on Water Resources

From: Roy L. Varner, Chairman,
Newton County Board of Commissioners

Re: Prepared Statement for Infrastructure Hearing

Chairman Anderson and Members of the Subcommittee:

First of all, let me say "Thank you" for allowing me to address you today. Those of us in local government always appreciate opportunities for us to express our opinions to our officials in Washington, especially in the area of water resources needs. It is particularly comforting for us to know that you feel that this area is important.

When I spoke to the Public Works Committee in Conyers last month, I addressed several areas of interest under the general topic of Infrastructure. Today's subject - Water Resources - is obviously a part of infrastructure. Therefore, please forgive me if I repeat myself somewhat.

We, like our neighbors in the piedmont area of North Georgia, understand that we will likely be relying on surface water to meet our community demands, at least for the foreseeable future. We also reiterate our commitment to the protection and preservation of the ground water sources which presently exist, with the hope that technological advances will make their utilization a viable community option for the future.

In the Newton County area, we are in the process of implementing a Water Improvement Package, which we hope will meet the water needs of our area for the next thirty to forty years. This package includes the construction of an 820 acre reservoir on Cornish Creek, an expandable 4.5 million gallon per day water treatment facility, necessary water storage tanks in appropriate areas of the county, and the extension of the public water system into areas not presently served by public water.

The citizens of Newton County, on October 27, 1987, voted overwhelmingly for the implementation of a one per cent (1%) Special Purpose Sales Tax, for the sole purpose of financing this water improvement package. The tax, which became effective on April 1, 1988, is expected to generate $16,000,000.00 over a five year period. Under Georgia Law, the revenue from this tax may only be used for water improvement.

It would have been impossible to have undertaken a project such as this without the full support of the local constituency. Additionally, the implementation of this project has required a truly combined effort of all levels of government. Our local team, which includes the City of Covington, other municipal governments in the area and the Newton County Water and Sewer Authority, have worked tirelessly and diligently. The Walton County government demonstrated full cooperation and support on many occasions.

On the state level, we have been very pleased with the assistance and cooperation of agencies such as the Department of Natural Resources (the the Environmental Protection Division and the Game and Fish Division), the Environmental Facilities Authority, the Governor's Office and the Department of Community Affairs. The federal regulatory agencies which were involved, the Army Corps of Engineers, the Fish and Wildlife Service and the Environmental Protection Agency, also were very cooperative.

Additionally, several non-governmental agencies provided technical assistance and comments which proved to be invaluable. Among these were the Georgia Conservancy and the Georgia Wildlife Federation.

Also, we have been very grateful for the support and assistance which our local, state and national elected officials have demonstrated to us. Your continuing support, in this and other matters, is critical to our being able to adequately serve our constituents. This brings me to two topics which I would like to address briefly. I also addressed the same topics at the Infrastructure Hearing in Conyers last month.

The first is the area of funding local projects. Water improvement projects in this geographical area usually require quite extensive capital outlay. There are several options which are available to governments for use in funding capital projects at a local level, and, as I mentioned earlier, we in the Newton County community have utilized these options . Also, we are very appreciative of the funding which has been made available to local governments at the federal level. However, it is my opinion that some of the most significant assistance which could be offered by the Congress at this time would be the implementation of a reasonable system of assisting governments with the funding and financing of local capital needs.

Most us in local government understand that federal budgetary restraints make grant programs difficult. Consequently, we do not expect large increases in these grants over the next few years. However, we would be pleased with some type of reasonable loan program, which might offer competitive rates and attractive repayment options. I personally feel that such a program would be the most significant step the federal government could take at this time to aid in the financing of local capital projects.

I would like to address one other concern about which we in local government feel strongly . That is in the area of federal mandates. Specifically, there have been several pieces of environmental legislation which have been adopted over the past few years, such as the Clean Air and Water Acts. Let me again state that I am totally committed to protecting our environment. It is obviously in the best interest of all the citizens of the country to assure that our environment is not harmed.

However, most of this legislation has tremendously stiffened the rules and regulations to which local governments must adhere without providing a source of funding of financing of the increased costs associated with their implementation. Our experience has also been that there is some unnecessary duplication and, in some cases, even apparent contradiction in the regulatory phase among the agencies empowered to enforce these rules and regulations. I would also like to express my opinion that these rules and regulations should, as much as possible, be written in layman's language, since we at the local level are primarily charged with their on site implementation.

As I stated last month, local government is indeed "where the rubber meets the road". We experience, on a day to day basis, the interaction of the constituency with their government. One of the major things which my fourteen years of serving as the Chairman of the Newton County Board of Commissioners has taught me is that, no matter what the issue, our goals can only be accomplished through a joint effort of federal, state and local governments, and with the consent of the constituency. These goals must motivate realization and rationalization in the mind of these constituents in order to be carried out. For it is true that, ultimately, the constituency sets the agenda.

It has been my sincere pleasure to be a part of today's program. Thank you for providing me the opportunity to state these points to you once again. We in local government certainly appreciate your taking an interest in these matters.

Sierra Club
Georgia Chapter

House Water Resources Sub-Committee

Field Hearing On Water Supply In the Chattahoochee-Appalachicola-Flint River Basins

Atlanta, Georgia
September 28, 1990

Statement Presented by Michael Wardrip, Water Issues Chair, On Behalf of the Georgia Chapter Sierra Club

Thank you Mr. Chairman and members of the committee. I am pleased to have this opportunity to come before you today to express the views and concerns of my organization regarding an issue that has potential national implications. The Sierra Club is a leading national environmental organization with over 550,000 members. The Georgia Chapter has approximately 8,000 members. We as Sierra Club members and activists share a great concern for the quality of our water resources and work diligently within the law to protect clean water. The Georgia Chapter of the Sierra Club has members who can be described as both upstream and downstream in relation to threats on water quality. We, in order to truly represent the concerns of our membership, must equally balance the water needs of Metro Atlanta and other major users, with the quality of water available to downstream users.

The Chattahoochee-Appalachicola-Flint (CAF) and Alabama Coosa (AC) watersheds are a resource that should be shared in a partnership between Alabama, Georgia and Florida. It is highly unfortunate that the debate over how to share that resource has become a struggle with serious political and legal elements. We are pleased that at least in the short term, the parties to the litigation over water rights in the CAF and AC basins are returning to negotiations under the court ordered stay in the legal proceedings. The legal situation at present, with somewhere near 12 interventions filed, could easily reach an unmanageable scope and could generate an interstate water fight that could spill over into the next century.

Regarding the Chattahoochee River, the historic position of the Georgia Chapter of Sierra Club has been in support of reallocation. During the time when a dam was proposed below Buford Dam to re-regulate the flow of the Chattahoochee and potentially supply more water to Metro Atlanta, the Georgia Chapter along with a number of Conservation groups, opposed the project on the grounds it was neither environmentally sound or financially prudent. Our position was then and still is, that re-authorization of Lake Lanier from having a first priority of power generation to having a first priority of water supply is a better alternative to a re-reg dam.

Our greatest concern however, is that with the privilege of using more water comes the responsibility to show good stewardship over that resource. Unfortunately, the expansion of Metro Atlanta has also brought a drastic increase in the environmental impacts on its adjacent river corridors. For far too long, little concern has been shown for those citizens who have the misfortune of living downstream. On any given rainy day, Combined Sewer Overflows are discharging huge amounts of raw or partially treated wastewater into rivers. Atlanta is not alone in the fact that they have a C.S.O. problem. In all, four other cities in Georgia also operate them in clear violation of Section 301 of the Federal Clean Water Act.

With the expansion of urban areas also comes an explosion in the impact of non-point source water pollution, All states are required under the 1987 amendments to the Clean Water Act, to develop plans to blunt the scourge caused by non-point source pollution. In Georgia, the non-point plan has been somewhat slow out of the starting gate. I cannot speak for what is happening in Florida and Alabama.

Non-point source water pollution is not an urban problem alone. Agricultural and silvicultural sources are also very significant. Add to this scenario, new rules being promulgated by E.P.A. requiring water quality compliance for stormwater management systems that empty into streams from a drain pipe.

My point in mentioning areas where serious water quality problems still abound is to point up the fact that there are sections of the Clean Water Act that are scarcely enforced, if at all. Those regulatory programs that have either been underenforced or where the "rubber hasn't hit the road" should be allowed time to catch up to the economic expansion that has happened in North Georgia and will most likely continue between now and 1996.

While on the subject of economic growth, I wish to point out that not everyone is desirous of a continued expansion of Metro Atlanta at a pace comparable to today's. For example, in my own home county of Gwinnett, citizens and homeowner groups are beginning to mount a backlash to unbridled development. There is a perception in the nation's fastest growing county in this decade, that citizen concern for quality of life is secondary to a compulsion to cater to the development community at all cost. We must ask ourselves, do we need to use more water in Metro Atlanta to improve the quality of life for our citizens, or are we simply ignoring our future in order to continue our wasteful, careless attitudes of the past?

Water conservation is the largest single untapped water resource for North Georgia. Sierra Club applauds the Georgia General Assembly and the Atlanta Regional Commission for enacting new water Conservation measures for residential consumers. The job is not done yet. There are still wide gaps between water rates in Metro Atlanta Municipalities. As an example, Dekalb County, just east of Atlanta, constructed most of its water supply infrastructure in a time when Federal grants were more available. As a result, Dekalb water rates are the lowest in the Metro Atlanta. They are so low relative to other neighboring counties, that is is hard to imagine anyone feeling a need to conserve unless required to do so by law or an unavailablity of water. Declining block rates must be totally eliminated and industrial and commercial users should be required to pursue aggressive water conservation measures. Xeriscaping should be the law of the land. Beyond requiring that water saving appliances and fixtures be used in new construction, retrofitting programs should be diligently pursued. Retrofitting may be somewhat costly in the short term, but the long term savings would be dramatic. In addition, we call on members of this committee to support the National Plumbing Products Efficiency Act; (H.R.1185, by Rep. Chester Atkins of Mass. and S.R. 583, by Sen. Wyche Fowler of Ga.). Under this act, nationwide water-use efficiency standards would be established for plumbing fixtures and appliances, labelling would be required for water use efficiency ratings and a nationwide data base would be established to monitor water demand and need particularly as they relate to plumbing fixtures and appliances.

The Sierra Club is supportive of the U.S. Army Corps of Engineers Comprehensive Studies for the Alabama-Coosa and Appalachicola-Chattahoochee-Flint River Basins. We feel that the regional planning approach to water resource management is sound. We also feel however, that this study needs to be broader in scope in terms of its participants. It needs to be an Environmental Impact Statement addressing water quality and water supply on an equal footing. It needs to be an inter-disciplinary and inter-agency effort which includes participation of E.P.A., Fish and Wildlife Service, and other relevant Federal and State agencies. Comprehensive analysis of natural systems and impacts on habitat and biodiversity need to be evaluated. Assessment of the cumulative impacts of both point and non-point source pollution must be done in order to accurately gauge the assimilative capacity of the receiving streams in the study area, before potentially increasing the level of insult to the environment.

Uniform minimum standards for water quality must be established for all states. One state should not be allowed to meet a standard less stringent than a neighboring state. This is especially true where we are dealing with an interstate water resource. The Federal government should engage in a more coordinated effort to smooth out the wrinkles in a patchwork of differing water quality standards. There is perhaps no better example of what I am referring to than the current controversy between Alabama and Georgia over the permitting of a Mead packaging facility and the Farley Nuclear Power Generating Plant. The current struggle is an outgrowth of poor communication, differing standards and a willingness of two governments to turn the permitting process into a political and legal football.

In conclusion, It is the Position of the Georgia Chapter of the Sierra Club that the basic concept of reallocation is sound. However, there have been far too many instances where users such as the city of Atlanta and others have not exercised responsible stewardship over a finite resource that must be shared with neighbors upstream and downstream. As long as flagrant pollution problems such as C.S.O.s exist and as long as eutrophication threatens to kill downstream lakes such as West Point, any consideration to increase water withdrawals, especially from the Chattahoochee should proceed with very cautious consideration of environmental impacts. Too much focus should not however, be placed on Metro Atlanta. Significant population concentrations tend to settle adjacent to reliable water resources. Other cities and industries all along the river corridors in our region are just as responsible for water quality protection. It just happens that Metro Atlanta is "pushing the envelope" in terms of its capacity to expand, given current limitations on water resources.

Any action taken to answer the current question of who controls the Chattahoochee-Appalachicola-Flint River Basin will affect the substance and tone of water rights debates long into the future. All parties involved in this issue, should, if at all possible set politics aside and remember the responsibility we have to protect our ability to sustain our natural environment in a manner that will serve our children long after we are gone.

ADDITIONS TO THE RECORD

Testimony Presented at a Public Hearing of the U.S. House Public Works Subcommittee on Water Resources Regarding the Long-Term Water Supply Needs of the Atlanta Region from the Apalachicola-Chattahoochee-Flint River Basin and the Operation of Buford Dam and Lake Sidney Lanier In Meeting Those Needs

Friday, September 28, 1990

This testimony was prepared by Ms. Jennifer DuBose and Mr. David Schonberger, representatives of the Georgia Environmental Project (G.E.P.), based in Atlanta. Mr. Schonberger is also representing Students Involved in Resources and the Environment (S.I.R.E.) at Emory University.

Ms. Jennifer DuBose
429 Moreland Ave., N.E.
Atlanta, GA 30307

Mr. David Schonberger
2234 Serpentine Dr.
Atlanta, GA 30345

Testimony

The Georgia Environmental Project (G.E.P.) is a non-profit citizens' organization based in Atlanta which works to protect Georgia's natural resources and to develop an ecologically sustainable society. Students Involved in Resources and the Environment (S.I.R.E.) at Emory University is a group of environmentally concerned students promoting sustainable, ecologically sound development in the Emory community and its environs.

Both organizations oppose plans to reallocate 20% of Lake Lanier's hydropower storage to water supply and to reallocate water from Carter's Lake and Lake Allatoona as well.

As with most natural resources, water is available in limited quantities and is unevenly distributed throughout the world. The amount of readily obtainable drinking water is even more limited. All of this has been particularly obvious in the Atlanta region during the past several years, causing Georgia to take a closer look at its water resources.

During the summers of 1986, 1988, and 1990, the Atlanta area experienced drought conditions that made water use restrictions necessary. During a drought, the demand for water increases while the supply decreases. With a lower than usual rainfall, the suburbs require more water to maintain lawns. But, since North Georgia gets its water from surface water, which is replenished by rainfall, the supply is already low during a drought. Also, water treatment facilities have too small a capacity to treat enough water for the current population. With current trends, Atlanta only promises to grow in the near future, and the water supply will not get any greater.

Water wars have traditionally been a western problem, but we are finally beginning to see that resources are limited everywhere and must be managed wisely to avoid shortages. North Georgia is dependent solely upon surface water, such as the Chattahoochee River, Lake Lanier, Carter's Lake, and Lake Allatoona. South Georgia relies mainly on groundwater. Surface water supplies are more sensitive to drought than are groundwater supplies; and, unfortunately, the greatest demands for water come from the more populated North, which really lacks adequate supplies for tremendous growth. The most serious water crisis exists in the Atlanta area, but the entire state faces a limited supply of water as well as an ever growing population to support. Therefore, the state must address the problem of how to meet these needs. The best solution to our water supply problem is to learn to live within the natural, ecological limits of our region. As nature's rule states, it is by adapting to nature that one lives. Humanity has greatly twisted this maxim by adapting nature to meet our needs and desires, at great cost to the global environment. The world has provided man with more than enough resources, and we have the ability to use these resources to our benefit. We can make the best use of these gifts by using only what we need and using it wisely, leaving nature as unaffected as possible.

So, before we even consider the proposals to increase the amount of water available for use, we should learn to make the best use of the water that we are already extracting from the earth.

Georgia, being new to water shortage problems, does not currently make the most of the water it uses. We have been lucky so far and have not had to worry about conservation, but that day is gone. With an extensive conservation program, it is possible for us to provide for our future needs without further exploitation of the environment.

We must make water conservation and efficiency a top priority. The Georgia Department of Natural Resources should have an office which is dedicated entirely to the conservation of water in the state. A thorough study is needed to assess the possibilities for meeting our water needs by conservation. Included in this testimony is helpful information about ways that other states have saved water. However, specific data is not possible without more extensive research.

One important conservation step that has already been taken in Georgia is the plumbing fixtures bill. This bill was passed in the 1990 General Assembly. It requires the installation of low water use plumbing in all new constructions. This includes the use of low-flow shower heads, the use of toilets that consume only 1.6 or fewer gallons per flush (gpf) instead of the old toilets that used 5-7 gpf, and the use of aerated faucets to decrease the amount of water needed to accomplish basic necessities. These improved fixtures decrease the daily water use of individuals without sacrificing one's quality of lifestyle. The Atlanta Regional Commission (ARC) estimates that this will save about 30 million gallons per day (MGD) by the year 2010. This is a great start to conservation, but it must be followed by even greater conservation measures.

A very necessary component of a successful program is public education. The way that we regard a resource affects the way that we treat it. With an attitude that water is abundant and unlimited, the use of it may be quite frivolous. By making the public aware of both the existing limits of our water supply and the ways in which they can help conserve, an important shift in thinking will occur. One easy way to raise awareness of the amount of water used in each household is to install meters in homes that lack them. With meters, a family is more able to see how much water it is using and how much it saves by implementing conservation strategies.

The laws of economics provide us with a simple way of decreasing water demand -- increasing the cost of using water. A price increase on water, should, of course, be well thought out. Water is a necessary element for life itself and should not be made unattainable because of cost. Some suggestions are: a flat rate for residential as well as commercial users, eliminating the discount some systems give for large quantity purchasers; an increasing block rate that charges more per unit for the amount used exceeding the average; and a seasonal rate or surcharge for summer uses that greatly exceed the winter averages. The ARC has suggested a 200% surcharge on any summer usage that exceeds 130% of the average winter use. This is a good proposal because it only affects those users who do not conserve. According to the ARC, this method has cut consumption in other cities by 8-10%. However, setting a higher limit for the base rate and making a stiffer penalty (such as a 500% surcharge) for exceeding the limit would get everyone's attention, even those who could afford to pay the smaller penalty. Also, water pricing should be such as to cover the costs of the water works system, with no artificially low prices from subsidies, so that the system is self-supporting and reclaims all costs from consumers. Water prices should also reflect the costs involved in transporting water long distances.

Currently, only withdrawals of over 100,000 gallons per day are required to be permitted, meaning that the majority of farmers who withdraw their own water for irrigation go unregulated. This has several consequences. For one thing, we have little ability to monitor such withdrawals and no ability to regulate the amount of water that is used. This lack of permitting also presents disadvantages for the farmers themselves. By not having permits for their withdrawals, the farmers have not really established a legal right to the water. Therefore, during droughts, it is difficult to assure farmers that water will be available for them to use. If permits were required for all withdrawals, then it would be possible to give priority to agricultural needs during times of shortage.

Georgia's large agricultural industry is an area where we could make significant reductions in the state's water consumption. Across the country, agricultural uses account for about 41% of all water uses, thus making this a good area for some significant savings. The feasibility of monitoring and charging for agricultural water withdrawals needs to be investigated. Farmers, just like other people, respond to an increase in cost by decreasing demand. By having to pay for water, farmers will likely improve irrigation methods, reduce pesticide use, and only grow those crops which generate income greater than the cost of the water used to produce the crops. In other words, farmers will only grow either indigenous crops which require little irrigation or high value crops which pay for their costs in water. Measures should be taken to educate farmers about more efficient irrigation technologies, and government assistance should be given for implementation of these measures.

Landscaping is another large water-consuming activity, with much room for improvement. Outdoor watering has been a strain on our water supply and is always the first activity to be restricted during shortages. It is not uncommon for a household to use as much water outside as inside during the summer. However, landscaping that requires much watering is poorly thought out, and we could avoid the problem of restrictions altogether if we landscaped wisely. The landscaping culprits are large grassy areas, as well as flowers and trees that come from areas with greater natural rainfall. Grass is a particularly thirsty plant; its shallow root system causes it to need frequent watering. Fertilizers and constant mowing cause grass to need even more water. We would be better off mimicking nature in our use and arrangement of plants. Native plants should be used since they have adapted to the area's rainfall conditions and, thus, need watering only during prolonged periods of dryness. This school of philosophy in landscaping is called xeriscaping.

The idea of xeriscaping is to create a landscape with very little water requirements. This is accomplished by using drought-tolerant and native plants and by limiting the area where the thirstier plants are, so as to contain the area which needs watering. The adoption of such theories could result in a reduction of outdoor watering by about 50% or an overall reduction of at least 15%, according to Fox

McCarthy of the Water Wise Council. His group is presently working on a model xeriscaping ordinance suitable for Georgia's climate. We could make a big dent in our water consumption by asking each county to adopt an ordinance appropriate for its area, requiring widespread compliance in new industrial and residential areas and in public works.

A large amount of our available water is also going to industrial use. Since there are many different industries in Georgia which use water in various ways, a specific plan of conservation is not possible. The state could achieve conservation in this area by offering to assist industries in water audits. These audits would be able to determine what course of action would be suitable for each particular industry.

Conservation can also be achieved indirectly by reusing water, thereby, decreasing the demand for treated water. Systems could be constructed that would use greywater in areas where it is not necessary to have potable water, such as outdoors or in the toilet. Greywater is water coming from showers, bathroom sinks, and the kitchen; this water is still usable and could be separated from other water destined for the sewage treatment system.

Another way of reusing water is to return partially treated waste water to homes for outdoor use. This type of program already exists in Hilton Head, South Carolina. Clayton County, Georgia has installed a similar system which pumps the waste water to a golf course to irrigate the grounds. This not only saves clean water for other uses, but also serves to reduce pollution in the bodies of water that receive the county's waste water. By using the waste water outdoors, the water is cleaned by nature as it filters through the soil.

Basically, all of our water uses must be seriously reevaluated. By changing certain aspects of the existing system, we can make a significant reduction in the amount of water that we need. The permitting of water withdrawals must reflect the fact that we are dealing with a limited and vital resource. Before any permit is granted, the request should be carefully considered, and a permit only given for a usage that is reasonable or beneficial to the public.

It is measures such as these that can make a real difference in our future. And, thus, we oppose reallocation plans until the state explores and implements, to the fullest potential, water use efficiency and conservation programs. If we do not change our philosophy of the existence of unlimited available water resources and, instead, begin conserving, we will constantly be searching for more and more water rather than working with what we have. The reallocation of Lake Lanier's water only promises to solve the water supply problem until the year 2010. Therefore, the current proposal is extremely short-sighted and not in Georgia's best interest. Also, it is not in Georgia's best interest nor in the interest of the planet, for that matter, to encourage continued population growth and to assume that economic growth requires a larger population. Rather, we should recognize that this region, like all others, only has the ability to support a certain finite population. Going beyond our carrying capacity is unsustainable from a regional and global perspective. If we cannot adequately support Atlanta's current population without considering reallocation, imagine what the situation is going to be like in twenty years and beyond when our population is nearly double what it is now. Certain cities in the western U.S. have formulated growth limitation policies; Atlanta, and even the whole state of Georgia, should investigate the details of these policies and develop a policy for this area. Only then will we begin to cap our population growth, which is currently spiraling exponentially out of control and threatening to undermine all efforts toward conservation and efficiency. Furthermore, we must realize that Atlanta will not necessarily suffer for lack of a greater water supply. The resources are not available in this area for industries that require extreme amounts of water. Many other industries exist that could bring economic growth to this region without straining our environment. And, as far as human resources are concerned, quality is better than quantity; Atlanta and Georgia can be leaders if we concentrate on nurturing the people we already have to get the most out of them, rather than trying to excel in having sheer numbers of people.

We also oppose the reallocation proposal because it would involve significant interbasin water transfers. Not only do interbasin water transfers diminish the amount of water available for development in the area of the removal, but they also create a growing demand for water in the area to which it is delivered. Transfers result in economic growth in one area and economic loss in the other. Specifically, Lake Lanier, and possibly West Point Lake, will be hurt by more water withdrawals; reallocation will make Lake Lanier water levels even lower during droughts - and it is possible that droughts will occur more often in the future. History shows that increased demand for water will nearly always result in a further need to increase the amount of water transfers in the future. This locks the government into a moral obligation to continue supplying water to meet the area's needs, regardless of economic and environmental costs. Furthermore, some people argue that the Chattahoochee River has already been stressed to its limit. A 1975 national water assessment study put the river on its critical list, as meeting more demands than probably any other in the Southeast.

In addition, we oppose the reallocation proposal because of its direct downstream effects, particularly on Alabama and Florida. Alabama has valid concerns that reallocation will reduce downstream flows and water quality, thereby affecting the state's economy. Florida has valid concerns that reallocation will increase pollution and salinity in the Apalachicola Bay oyster beds and affect the Florida Panhandle's economy. In addition, proposed water withdrawal contracts between the Corps of Engineers and Georgia governments would establish a long-term "right" of Georgia to the water. It almost seems as if Georgia (imperialistic U.S.) is arguing with Alabama and Florida (Iraq) over whether or not we have a "right" to the water (oil) in order to protect "our way of life."

Therefore, we want a moratorium on water withdrawal increases from Carter's Lake, Lake Allatoona, and Lake Lanier until a Comprehensive long-term water issues and population growth policies Studies Plan has been completed, in which all the issues addressed in this testimony are considered. A good study would also consider the possibility, or probability, that the frequency and severity of droughts in the future will be greater because of greenhouse warming. In conclusion, Georgia was given an adequate water supply, and we must learn to live within our natural, ecological limits. In other words, our water supply is not the problem; our problem is poor management of the supply and poor management of our population growth.

STATE OF GEORGIA
OFFICE OF THE GOVERNOR
ATLANTA 30334

Joe Frank Harris
GOVERNOR

November 8, 1989

The Honorable Guy Hunt
Governor
State of Alabama
State Capitol
Montgomery, Alabama 36130

Dear Governor Hunt:

This will acknowledge the receipt of your letter of October 16, 1989, expressing your concerns about a proposal to reallocate some 200,000 acre feet of Lake Lanier's waters from power generation to critically needed water supply. I previously made efforts to keep you informed on this matter (see my attached letter). Your designee has been in meetings in Atlanta on at least three occasions discussing this subject. I would like to allay your fears by sharing what I understand about the situation.

Studies by the U. S. Army Corps of Engineers, as well as studies by the State of Georgia, project no significant economic or environmental downstream impacts. The primary reason is that the amount of water now released weekly from Lake Lanier will remain the same. Neither Alabama nor Florida should expect any effects at all resulting from the reallocation of a small amount of the total of 1.1 million acre feet now stored in Lake Lanier.

The October 1989 U. S. Army Corps of Engineers' POST AUTHORIZATION CHANGE REPORT specifically addresses your concerns regarding environmental and economic impacts. On page 26 of the report, the Corps concludes that the overall impacts to navigation are considered minor. They then conclude that the impacts of reallocating some of the storage in Lake Lanier from hydropower to water supply on the environment are minor and insignificant. Finally, their study documents that the impacts downstream of Atlanta on recreation and hydropower are considered minimal.

The Honorable Guy Hunt
Page Two
November 8, 1989

In all candor, I was somewhat disappointed by your plans to oppose the reallocation because I am unaware of any adverse impacts on Alabama. I sincerely hope that you and I - working together - can successfully resolve this matter. We have enjoyed a compatible and productive relationship to date, and you should feel confident that I desire that relationship to continue and for both our states to prosper. I look forward to hearing from you.

With kindest regards, I remain

Sincerely,

Joe Frank Harris

JFH/hd

Statement From

Sally Smith Jorden
1583 Timberland Road
Atlanta, Georgia 30345

To

U.S. House Public Works Subcommittee

September 28, 1990

Decatur, Georgia

My name is Sally Smith Jorden; I live at 1583 Timberland Road, Atlanta, Georgia (30345) in the heart of unincorporated DeKalb County. I am the former business manager for a consulting engineering firm here in Atlanta, so I have followed the water supply issue with more than casual interest. My statement, however, is that of a native Georgian who is concerned with the future of her state, not on behalf of any special interest group, the business community, or consulting engineers.

Metro Atlanta must have additional water supply if it is to continue to grow and continue to be the economic engine that drives growth in Georgia and the entire Southeast. North Georgia, south Georgia, Alabama and northern Florida need a robust and viable Atlanta. To think that business will locate in Columbus, Panama City, Gainesville, or Montgomery if there is a water moratorium in Atlanta is simply not true. Atlanta is competing with San Francisco, Melbourne and Toronto, not Birmingham.

From the information I've garnered from the newspaper (and like Will Rogers, I only know what I read in the newspapers), the good news is that there is adequate flow available in the Chattahoochee and Etowah River basins to satisfy all the desired needs of water supply, recreation, wastewater assimilation, barge travel and even some power generation IF the resource is properly managed.

The problem is that most of these demands occur simultaneously and at the worst possible time - during a summertime drought. Water consumption, power demands, and recreational activities all increase in hot, dry weather, yet assimilative capacity is reduced by high temperatures and low flows. Priorities, therefore, must be set based on both economic and environmental factors.

The number one priority, however, must be water supply for metro Atlanta. Atlanta does not need to be hosting the 1996 Olympics in the midst of a water moratorium. Congress must take the necessary steps now to reallocate the water stored in Lake Lanier and Lake Allatoona for drinking water as the number one priority. Hydroelectric power must be a secondary purpose, especially since additional facilities are coming on line for power generation.

On the other hand, recreation and barge traffic considerations should not be automatically sacrificed to water supply needs. It is my understanding that we can accomplish all three purposes if:

1. Water taken from the Chattahoochee and Etowah River Basins is returned to those basins. We cannot divert flow from the Chattahoochee to the South River or Yellow River without expecting our downstream neighbors to be upset.

2. The quality of the water returned to the Chattahoochee or Etowah Rivers must be compatible with downstream water uses, such as recreation at Lake Walter F. George, water supply at Columbus, and shellfish production at Apalachicola.

Congress should immediately move ahead with making water supply the number one priority for water stored in Lake Lanier and Lake Allatoona, but local governments must bite the bullet and begin planning to return flows to the Chattahoochee and Etowah Rivers in a quality and quantity equal to the water removed, with adjustments for irrigation and septic tank losses. This issue must cease being a battle between upstream and downstream users and instead become a matter of wise management of a valuable resource - water - to everyone's benefit. In this issue, there should ~~be~~ no losers, only winners.

Thank you.

DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
WASHINGTON, D.C. 20314-1000

27 JUL 1990

REPLY TO
ATTENTION OF:

Policy and Planning Division
  Eastern Planning Management Branch

Honorable Sam Nunn
United States Senate
Washington, DC 20510-6050

Dear Senator Nunn:

Thank you for your letter of July 2, 1990, concerning the Post Authorization Change (PAC) Report for Lake Lanier. Indeed, the PAC will be handled separately from the comprehensive study mentioned in your letter. As outlined in the conceptual plan for the comprehensive study, the PAC will not be submitted to this office or considered for congressional authorization until the States of Georgia, Alabama, and Florida have had an opportunity to resolve water rights issues associated with the proposed reallocation. The processing of the PAC is further complicated by the recent lawsuit filed by the State of Alabama. This raises the possibility of court ordered restraints. In connection with the lawsuit, we have reached an agreement with Alabama that we will not process the PAC or execute interim water supply agreements at Lake Lanier before November 13, 1990, unless a suitable agreement involving all parties is worked out prior to that date.

I'm sure you can appreciate the sensitivity of the issues involved and the need for the involvement of the Governors in this process. We intend to work with the States of Georgia, Alabama and Florida to assist them in reaching a fair and equitable resolution of issues involving water supply.

I hope the above has clarified the status of the PAC.

Sincerely,

Dan M. Mauldin
Patrick J. Kelly
Major General, U. S. Army
for Director of Civil Works

STATEMENT BY
CENTRAL ELECTRIC POWER COOPERATIVE, INC.
BEFORE THE
COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION
SUBCOMMITTEE ON WATER RESOURCES
FIELD HEARING
DECATUR, GEORGIA
SEPTEMBER 28, 1990

Mr. name is C. Pinckney Roberts. I am Assistant General Manager and General Counsel for Central Electric Power Cooperative, Inc. I am making this statement on behalf of Central Electric Power Cooperative, Inc. (hereinafter "Central"). Central is a G & T electric cooperative corporation organized and existing under the laws of the State of South Carolina. The primary purpose of Central is to provide the wholesale power requirements of its corporate members (owners): fifteen distribution electric cooperatives[1].

The principles involved in the reallocation of water use evidenced by the pending legislation with regard to Lake Sidney Lanier in the State of Georgia are important principles to Central and the 260,000 consumers served by its member distribution electric cooperatives. Central's member cooperatives, as well as a number of other preference customers in the Southeastern Power Administration area of operation, chose years ago to purchase hydro-electric power made available by SEPA in lieu of constructing generating facilities of their own to produce that needed power. That increment of power has over time become a valuable and economical resource to Central and its members. However, the opportunity to build generation which Central's members forewent in those early days is available today only at significantly higher cost. Indeed, new hydro-capacity may not be available today at any cost. It is for this reason that Central and the other preference customers of SEPA have a legitimate, vested economic interest in the water impounded by the reservoirs powering the SEPA projects.

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[1] The member distribution cooperatives of Central are: Aiken Electric Cooperative, Inc., Berkeley Electric Cooperative, Inc., Black River Electric Cooperative, Inc., Coastal Electric Cooperative, Inc., Edisto Electric Cooperative, Inc., Fairfield Electric Cooperative, Inc., Horry Electric Cooperative, Inc., Lynches River Electric Cooperative, Inc., Marlboro Electric Cooperative, Inc., Mid-Carolina Electric Cooperative, Inc., Newberry Electric Cooperative, Inc., Palmetto Electric Cooperative, Inc., Pee Dee Electric Cooperative, Inc., Santee Electric Cooperative, Inc. and Tri-County Electric Cooperative, Inc.

Hydropower customers pay the vast majority of the costs of these federal reservoirs. A loss of the electric output of these projects would cause economic hardship to Central and its members.

Central realizes that the demands for water in the Southeast are growing. Central understands that water for residential and commercial use, particularly in growing metropolitan areas, is important. This reality was recognized by Central and other SEPA customers in the negotiations which lead to an agreement on the reallocation of a portion of Lake Sidney Lanier to municipal water use by the Atlanta region. In those same negotiations the municipal representatives recognized the financial impact upon the electric customers of diverting water from hydro-generation to municipal use. The formula for payments by the municipal water users and the method of applying those payments to reduce the future cost of power to hydroelectric customers to match the diminished output of hydro-electric power from the project is a clear example of the cooperation which can be reached among competing water users. The intent of the parties in drafting this legislation should be affirmed by the subcommittee and the full committee so as to carry out a fair and equitable process of water use reallocation in the public interest.

Respectfully submitted,

CENTRAL ELECTRIC POWER COOPERATIVE, INC.

By: C. Pinckney Roberts (dsk)
C. Pinckney Roberts, Assistant General
Manager & General Counsel
Post Office Box 1455
Columbia, South Carolina

September 23, 1990

WRITTEN STATEMENT BY F. F. STACY
FOR THE RECORD
COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION
SUBCOMMITTEE ON WATER RESOURCES
FIELD HEARING
DECATUR, GEORGIA
SEPTEMBER 28, 1990

My name is F. F. Stacy. I am President of the Southeastern Power Resources Committee, Inc., an incorporated association of rural electric cooperatives in five southeastern states. I am submitting this statement on behalf of the Southeastern Federal Power Customers Group ("SFPCG"), which is an ad hoc association of rural cooperative and municipally owned electric systems located in the states of Alabama, Georgia, Mississippi, and North and South Carolina, serving over 8 million consumers. These cooperatives and municipal systems purchase power from the Southeastern Power Administration, the agency that markets power produced from the Georgia-Alabama system of projects, operated by the U.S. Army Corps of Engineers.

REALLOCATION OF LAKE LANIER

The SFPCG has been deeply involved in the proposed permanent reallocation of Lake Lanier. When the reallocation was initially proposed, we agreed to enter into negotiations to reallocate a portion of Lake Lanier from hydropower generation to water supply. We agreed to enter into these negotiations because the Atlanta Regional Commission ("ARC") approached us with the commitment to pay for the benefits they sought to receive, by compensating power customers for lost hydropower generation.

After extended negotiation, the parties agreed upon a lump sum payment as fair compensation. The payment was intended to represent the total replacement power costs arising from the reallocation over the remaining life of Buford Dam. This agreement was incorporated into draft legislative language which to date has not been introduced. As the power customers and water supply interests were coming to an agreement, interests in Alabama, Florida, and southern Georgia began to voice concern over the potential downstream impacts of the reallocation.

The settlement we reached with the ARC is a model for expanding the use of federal water resources projects by evaluating the needs of competing users and compensating those who have borne the burden of project investment in an appropriate manner. It is entirely consistent with the basis on which federal water resources projects, such as Buford Dam, were constructed and with the level of benefits which hydropower customers have received in the past. Each such project was authorized by Congress based on the Corps' studies of costs and benefits, upon finding that the benefits of particular project purposes exceeded project costs. The Corps constructed the projects, and allocated costs to project purposes, typically flood control, navigation and power generation, based upon authorized and anticipated use. Hydropower customers promised to purchase the power output and to repay costs allocated to power in return for long-term access to this capacity and energy source. In numerous cases, power customers are the only project beneficiaries who pay for project investment.

If benefits are diverted from a project's stated purposes, then those purposes who pay for their project usage should be fairly compensated. In the case of Lake Lanier, we, as hydropower customers, do not wish to stand in the way of needed water supply for the residents of metro Atlanta; however, we do assume that any reallocation of water storage would be accompanied by a reassignment of cost responsibility and appropriate compensation.

GENERAL POSITION

Southeastern power customers are well aware of the controversy which surrounds the use of the waters of the Apalachicola-Chattahoochee-Flint ("ACF") Basin, and in particular Lake Lanier. We understand that the projects built on this river system, which Congress authorized to be constructed primarily for flood control, navigation, and hydropower generation, have become important in recent years as potential sources of municipal and industrial water supply and recreation -- uses which Congress did not rely upon when authorizing these projects and which pay none of the costs. Power customers do not wish to stand in the way of these uses, which provide important local benefits. However, we believe that these new users should pay their way, and not enjoy benefits from projects whose costs have been shouldered by municipal and rural electric consumers. We also believe that the Corps of Engineers should be required to seek meaningful public involvement in making decisions on project operations, and should carefully observe the limits on management discretion imposed by Congress. And we stand firmly behind the principle that decisions concerning project management which affect regional development and have wide-ranging economic impacts should be made by Congress, not the Corps.

Respectfully submitted,

F. F. Stacy
Chairman, Southeastern
Federal Power Customers Group

Save The Lake Association, Inc.

September 25, 1990

The Honorable Ben Jones
Representative, State of Georgia
c/o The Subcommittee on Water Resources
B370-A Rayburn House Office Building
Washington, D. C. 20515

In Re: Subcommittee September 28, 1990 Meeting, Decatur, GA.

Dear Representative Jones:

Our non-profit Association has been working to preserve our water resources since 1986. Our efforts were instrumental in some changes being made in the operation of the Apalachicola-Chattahoochee-Flint River System which better balanced the water supply for all users.

Now, with the Senate's amendments to Section 308 of the 1990 Water Resources Bill, and similar legislation pending in the House of Representatives, much of the good our work has done is being undone and water supply, quality and the greatest economic factor to the State of Georgia (tourism) is being jeopardized. Had the Southeastern Power Association in August and September of 1987 cooperated and reduced power generation instead of taking Lake Lanier down over eight (8) feet in those two months as the continued drought became evident, the results would not have been as devastating. These bills virtually give SEPA full power to control our water supply. This is 1990--not 1946! Hydro-electric power from Lake Lanier is not vital to the users; can be obtained through alternate sources with very little additional cost to the consumer in spite of SEPA's exaggerated claims; and other needs including the vital drinking water supply can be better managed.

Law Environmental has just completed a review of the preliminary Corps of Engineers PAC Change Notification Report for the Reallocation of Water Storage in Lake Lanier. Complete copies of this report are being sent to Senators Nunn and Fowler and Congressman Jenkins. The report shows that in "average rainfall times" with the average "in-flows" into Lake Lanier, the demands for water from Atlanta would keep the Lake 1-1/2 to 2 feet lower than under the Water Control Plan which the Corps adopted in 1989.

In addition, the report shows that provided "inflows were the same during a drought as experienced in 1986-88, the Lake would go to a low of 1040" (without a SEPA repeat of 1987). However, with increased demands on ground water in the watershed area of Lake Lanier, and any demands out of the streams and rivers not included in the reports, the levels could be much lower than 1040.

AT 1040 FORSYTH COUNTY WOULD HAVE NO WATER AT ALL. THEIR INTAKE IS AT 1040! FURTHERMORE, IF THE LAKE LEVEL WERE BELOW 1045, THEY WOULD BE GETTING MORE MUD THAN WATER. PLUS THE FACT, THAT IF AND WHEN RAINS DO OCCUR AFTER THE LAKE HAS BEEN LOWERED TO THE EXTREMES IT WAS IN THE 1980'S, EROSION REDUCES THE LAKE CAPACITY TO WHEREIN THESE INTAKES ARE JEOPARDIZED FOR ALL FUTURE WATER SUPPLY!

LAKE LANIER IS THE STORAGE BASIN OF LAST RESORT DURING DROUGHTS. IT MAKES MORE SENSE TO HOLD LAKE LANIER AT THE HIGHEST LEVELS POSSIBLE SO THAT THERE WILL BE WATER

MAILING ADDRESS:
P.O. BOX 1941
CUMMING, GEORGIA 30130
404 889-6128

OFFICES LOCATED AT:
ROUTE 9
#7 CASAROGA ON LANIER
CUMMING, GEORGIA 30130

Page 2
To: The Honorable Ben Jones
September 25, 1990

TO LET DOWNSTREAM DURING PERIODS OF DECREASED RAINFALL. A FAIR AND EQUITABLE PLAN MUST BE DEVISED TO SERVE ALL NEEDS, AND DURING DROUGHTS, A PLAN TO REDUCE THE WATER OUTFLOWS FOR CONSERVATION CUTTING OFF THE USERS WHOSE USE HAS THE LEAST ECONOMIC IMPACT. UNLESS THE PROPER STUDIES ARE DONE ON ECONOMIC AND ENVIRONMENTAL IMPACTS ON ALL USERS AND THE ENTIRE WATERSHED, NO EQUITABLE PLAN CAN BE DETERMINED. IN ADDITION, IT IS IMPERATIVE THAT WATER CONSERVATION MEASURES BE IN EFFECT AT ALL TIMES. LAKE LANIER IS SUFFERING NOW FROM WATER LEVELS FIVE FEET UNDER WHAT IT WAS LAST YEAR, YET ATLANTA HAS LIFTED ALL WATER RESTRICTIONS. THE PUBLIC WILL NEVER LEARN TO CONSERVE UNTIL CONSERVATION MEASURES ARE PRACTICED AT ALL TIMES, NOT AFTER THE DROUGHT STARTS HAVING ECONOMIC EFFECTS AS IT IS DOING NOW.

Information is not available to the Corps of Engineers on a timely basis for the most efficient operation of Lake Lanier and the rest of the AFC Chain. Our Association has recommended that studies be completed and a "real time monitoring system" installed that would enable the Corps to better "juggle" the water uses among the reservoirs on a timely basis. Law Environmental has plotted every existing rain gage and water flow gage presently in the entire Chain. They submitted a proposal to us for "studies incorporating a real time monitoring system including design" at a cost of $250,000 for the section from North Georgia to the Peachtree Creek Intake. If monies were appropriated for these complete studies, and such a system were in place, the costly "need and use studies" would be more accurate and truly show how the AFC Chain could be operated to the best advantage of all users.

Tourism is Georgia's second largest industry. Recent studies (prepared for Georgia's Industry and Trade Association) show over a TWO BILLION DOLLAR ECONOMY IN NORTH GEORGIA FROM TOURISM WITH LAKE LANIER SITTING IN THE CENTER OF THAT AREA. THIS DOES NOT REFLECT THE BENEFITS TO THOSE OUTSIDE THE AREA SUCH AS ATLANTA OR OTHER CITIES' BOAT DEALERS, MANUFACTURERS, TOWING VEHICLES DEALERSHIPS, ETC.. NOR DOES IT REFLECT THE PROPERTY VALUES AROUND LAKE LANIER, POPULATION GROWTH FACTORS AND NEW INDUSTRY MOVING INTO NORTH GEORGIA TO BE CLOSE TO THIS RECREATIONAL FACILITY. NO PROPER COMPARISON HAS BEEN DONE TO SHOW THESE VALUES AS PART OF THE USER SYSTEM WHEN EVALUATING HYDRO-POWER, NAVIGATION AND OTHER USES.

OBVIOUSLY WATER SUPPLY AND WATER QUALITY MUST BE PUT FIRST. THERE MUST BE PROPER DISTRIBUTION TO ALL WHO NEED THIS WATER AND WITH COMPLETE AND ENFORCEABLE WATER CONSERVATION MEASURES INCLUDING REQUIRING COMMUNITIES TO CLEAN UP THEIR DISCHARGES SO WATER SUPPLY IS NOT THE PRIMARY SOURCE OF DILUTION. THEN DROUGHT PLANS SHOULD BE BASED ON THE REDUCTION TO USERS HAVING THE LEAST ECONOMIC EFFECT TAKING INTO CONSIDERATION THE ENVIRONMENTAL IMPACT.

OUR ASSOCIATION WILL BE PLEASED TO MAKE AVAILABLE TO THIS COMMITTEE ANY AND ALL STUDIES AND INFORMATION WE HAVE FUNDED OVER THESE FOUR YEARS. WE APPRECIATE THIS OPPORTUNITY TO SUBMIT THIS REPORT.

Respectfully yours,

Eileen B. White
President